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     (FILE 'HOME' ENTERED AT 14:45:14 ON 11 MAY 2003)

     FILE 'REGISTRY' ENTERED AT 14:45:19 ON 11 MAY 2003
L1             5 S IPA/CN
L2             1 S (ISOPROPANOL)/CN

     FILE 'CAPLUS' ENTERED AT 14:45:58 ON 11 MAY 2003
L3         42546 S L2
L4          1203 S L3 AND (?SILOX?)
L5             0 S (CERAMIC HYDBRID?)
L6           109 S (CERAMIC HYBRID?)
L7             0 S L4 AND L6
L8             0 S L4 AND (CIRCUIT? AND CERAMIC?)
L9            16 S L4 AND CIRCUIT?
L10           16 FOCUS L9 1-
L11           16 S L4 AND HYBRID?
L12           15 S L11 NOT L9
L13           15 FOCUS L12 1-

=>
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L10 ANSWER 1 OF 16 CAPLUS COPYRIGHT 2003 ACS
AN 1989:9818 CAPLUS
DN 110:9818
TI Storage-stable ladder **siloxane** coating materials
IN Nagata, Kenji
PA Fujitsu Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C09D003-82
ICA C08G077-38
CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 76
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
| --- | --- | --- | --- | --- | --- |
| PI | JP 63196669 | A2 | 19880815 | JP 1987-30055 | 19870212 |
| PRAI | JP 1987-30055 | | 19870212 | | |

AB Title materials, useful as insulation films in multilayer printed **circuits**, are prepd. by self condensation of poly( **diethoxysiloxane**) (I) during solvent exchange from isopropanol to butyl Cellosolve acetate (II) to decrease OH content in I, then treating the resulting polymer with glass resins. Thus, a soln. of 300 .+-. 1.5 g I in isopropanol was mixed with 1635 .+-. 0.8 g II and vacuum evapd. at 35 .+-. 1.degree., then the resulting mixt. was treated with 48.0 .+-. 0.2 g glass resin at 60.degree. to give a ladder **siloxane**, which showed no change in viscosity when stored at 5.degree. for 1 mo.
ST ladder **siloxane** insulator printed **circuit**; glass resin coating printed **circuit**; printed **circuit** insulating coating **siloxane**
IT Electric insulators and Dielectrics
(coatings, ladder **siloxanes**, prepn. of, with good storage stability, for printed **circuits**)
IT Electric **circuits**
(printed, insulator films for, ladder **siloxanes** as, with good storage stability)
IT **67-63-0**, Isopropanol, uses and miscellaneous 112-07-2, Butyl cellosolve acetate
RL: USES (Uses)
(solvent, in manuf. of storage-stable ladder **siloxane** coatings)
RN **67-63-0**
RN 112-07-2

L10 ANSWER 2 OF 16 CAPLUS COPYRIGHT 2003 ACS
AN 1996:472864 CAPLUS
DN 125:171569
TI Environment-friendly washing process using **siloxanes**
IN Shirai, Michio
PA Olympus Optical Co, Japan
SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C11D007-22
ICS B08B003-08
CC 46-6 (Surface Active Agents and Detergents)
Section cross-reference(s): 48, 76
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | JP 08134498 | A2 | 19960528 | JP 1994-276603 | 19941110 |
| PRAI | JP 1994-276603 | | 19941110 | | |

GI For diagram(s), see printed CA Issue.

AB Washing liqs. contg. low-mol. volatile Me3SiO(SiMe2O)nSiMe3 (n = 0, 1, 2) and/or cyclic **siloxanes** I (m = 4, 5) in consecutively linked washing baths are moved reversely toward the moving direction of the substrates, and the liqs. are removed from the 1st bath, distd. to remove highly volatile impurities, and supplied to the last bath. The washing liqs. may be (pseudo)azeotropic (1) a mixt. of **hexamethyldisiloxane** and MeOH, EtOH, or isopropanol, (2) a mixt. of **octamethyltrisiloxane** (II) and isopentyl alc., 2-pentanol, propylene glycol mono-Et ether, propylene glycol tert-Bu ether, propylene glycol mono-Me ether acetate (III), propylene glycol mono-Et ether acetate (IV), or 3-methyl-3-methoxybutyl acetate, (3) a mixt. of **decamethyltetrasiloxane** and dihydroterpineol, or (4) a mixt. of **octamethylcyclotetrasiloxane** and III or IV. Lead frames of Cu were subjected to the washing process using II alone.

ST environment friendly washing process **siloxane**; lead frame copper washing process; cyclic **siloxane** detergent; azeotropic **siloxane** alc mixt detergent; pseudoazeotropic **siloxane** alc mixt detergent

IT Detergents
Electric **circuits**
(low-mol.-wt. volatile (cyclic) **siloxanes** or their (pseudo)azeotropic mixts. with alcs. as recyclable washing liqs.)

IT Alcohols, uses
**Cyclosiloxanes**
**Siloxanes** and Silicones, uses
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(low-mol.-wt. volatile (cyclic) **siloxanes** or their (pseudo)azeotropic mixts. with alcs. as recyclable washing liqs.)

IT 64-17-5, Ethanol, uses 67-56-1, Methanol, uses **67-63-0**, Isopropanol, uses 107-46-0, **Hexamethyldisiloxane** 107-51-7, **Octamethyltrisiloxane** 123-51-3, Isopentyl alcohol 141-62-8, **Decamethyltetrasiloxane** 541-02-6, **Decamethylcyclopentasiloxane** 556-67-2, **Octamethylcyclotetrasiloxane** 6032-29-7, 2-Pentanol 52125-53-8, Propylene glycol monoethyl ether 58985-02-7, Dihydroterpineol 80763-10-6 84540-57-8, Propylene glycol monomethyl ether acetate 98516-30-4, Propylene glycol monoethyl ether acetate 103429-90-9, 3-Methyl-3-methoxybutyl acetate
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(low-mol.-wt. volatile (cyclic) **siloxanes** or their (pseudo)azeotropic mixts. with alcs. as recyclable washing liqs.)

RN 64-17-5
RN 67-56-1
RN **67-63-0**
RN 107-46-0
RN 107-51-7
RN 123-51-3
RN 141-62-8
RN 541-02-6
RN 556-67-2
RN 6032-29-7
RN 52125-53-8
RN 58985-02-7
RN 80763-10-6
RN 84540-57-8

RN 98516-30-4
RN 103429-90-9

L10 ANSWER 3 OF 16 CAPLUS 
AN 1986:544619 CAPLUS
DN 105:144619
TI Cleaning a **circuit** board
IN Wong, Ching Ping
PA AT and T Technologies, Inc., USA
SO U.S., 3 pp.
CODEN: USXXAM
DT Patent
LA English
IC ICM C23G001-02
ICS C23G001-14
NCL 134028000
CC 76-14 (Electric Phenomena)
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | US 4604144 | A | 19860805 | US 1985-774674 | 19850911 |
| PRAI | US 1985-774674 | | 19850911 | | |

AB In a method of cleaning a **circuit** board having a silicone-encapsulated hybrid integrated **circuit** on it, subsequent to aq.-solder-flux residue removal with an ionic detergent (e.g., ethanolamine) the board is cleaned with a low-mol.-wt. org. acid, such as formic, acetic or oxalic acid. Addnl., the silicone may be swelled prior to or during treatment with the aq. org. acid soln. The swellant comprises a member of the group consisting of alcs. and fluorocarbons, including MeOH, EtOH, PrOH and i-PrOH. Application of the method to cleaning hybrid integrated **circuits** is indicated.
ST **circuit** board cleaning; carboxylic acid **circuit** board cleaning; silicone encapsulant **circuit** board cleaning; ionic detergent **circuit** board cleaning; integrated **circuit** cleaning
IT Soldering
(elec. **circuit** board cleaning prior to)
IT **Siloxanes** and Silicones, uses and miscellaneous
RL: USES (Uses)
(encapsulants, for elec. **circuit** boards, cleaning of)
IT Carboxylic acids, uses and miscellaneous
RL: USES (Uses)
(in elec. **circuit** board cleaning)
IT Alcohols, uses and miscellaneous
RL: USES (Uses)
(swellants, for silicone encapsulants, in elec. **circuit** board cleaning)
IT Hydrocarbons, uses and miscellaneous
RL: USES (Uses)
(chloro fluoro, swellants, for silicon encapsulants, in elec. **circuit** board cleaning)
IT Electric **circuits**
(integrated, cleaning of)
IT Detergents
(ionic, in elec. **circuit** board cleaning)
IT Electric **circuits**
(printed, boards, cleaning of)
IT 141-43-5, uses and miscellaneous
RL: USES (Uses)
(detergent, for elec. **circuit** board cleaning)
IT 64-18-6, uses and miscellaneous 64-19-7, uses and miscellaneous
144-62-7, uses and miscellaneous

RL: USES (Uses)
(in elec. **circuit** board cleaning)
IT 64-17-5, uses and miscellaneous 67-56-1, uses and miscellaneous
**67-63-0**, uses and miscellaneous 71-23-8, uses and miscellaneous
RL: USES (Uses)
(swellant, for silicone encapsulants, in elec. **circuit** board
cleaning)
RN 141-43-5
RN 64-18-6
RN 64-19-7
RN 144-62-7
RN 64-17-5
RN 67-56-1
RN **67-63-0**
RN 71-23-8

L10 ANSWER 4 OF 16 CAPLUS COPYRIGHT 2003 ACS
AN 1983:99846 CAPLUS
DN 98:99846
TI Printed **circuit** board
PA Fujikura Cable Works, Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC H05K003-44
CC 76-14 (Electric Phenomena)
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | JP 57172797 | A2 | 19821023 | JP 1981-56816 | 19810415 |
| PRAI | JP 1981-56816 | | 19810415 | | |

AB The printed **circuit** board is characterized by a <0.4 mm thick Al layer formed on the surface of the metal such as Fe, Fe alloy, Cu, Cu alloy or Al-Si based alloy, and anodically formed pores filled with a polymer.
ST alumina polymer insulator printed **circuit**
IT **Siloxanes** and Silicones, uses and miscellaneous
RL: TEM (Technical or engineered material use); USES (Uses)
(elec. insulators, for printed-**circuit** board)
IT Electric **circuits**
(printed, boards, alumina and polymer insulators for)
IT 2171-98-4D, hyd., polymer 6184-20-9D, hyd., polymer 51382-55-9D, hyd., polymer 83644-71-7D, hyd., polymer
RL: TEM (Technical or engineered material use); USES (Uses)
(elec. insulators, for printed-**circuit** board)
IT 64-19-7, uses and miscellaneous **67-63-0**, uses and miscellaneous
RL: USES (Uses)
(in prepn. of porous substrates for printed **circuits**)
IT 7429-90-5, uses and miscellaneous 7439-89-6, uses and miscellaneous
7440-50-8, uses and miscellaneous
RL: USES (Uses)
(on aluminum alloy porous boards for printed **circuits**)
IT 12679-19-5
RL: USES (Uses)
(on porous board for printed **circuits**)
RN 2171-98-4D
RN 6184-20-9D
RN 51382-55-9D
RN 83644-71-7D
RN 64-19-7
RN **67-63-0**

RN 7429-90-5
RN 7439-89-6
RN 7440-50-8
RN 12679-19-5

L10 ANSWER 5 OF 16 CAPLUS COPYRIGHT 2003 ACS
AN 1993:130098 CAPLUS
DN 118:130098
TI Silicone resin additives for fluxes and soldering pastes
IN Gomi, Tadashi; Douzaki, Yuji
PA Yuho Chemicals Inc., Japan
SO Eur. Pat. Appl., 13 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM B23K035-363
CC 56-9 (Nonferrous Metals and Alloys)
Section cross-reference(s): 76
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | EP 510539 | A1 | 19921028 | EP 1992-106665 | 19920416 |
| | EP 510539 | B1 | 19970827 | | |
| | R: DE, FR, GB, NL, SE | | | | |
| | JP 05092296 | A2 | 19930416 | JP 1991-112550 | 19910417 |
| | JP 08004953 | B4 | 19960124 | | |
| | US 5215601 | A | 19930601 | US 1992-868416 | 19920415 |
| PRAI | JP 1991-112550 | | 19910417 | | |

AB The soldering flux mixts. and pastes include silicone resins to react with org. acids or their salts for deactivation and decreased corrosion. The resins are selected from methylsilicone, methylphenylsilicone, and/or modified silicone types. The flux mixt. optionally includes a solvent with s.p. below the m.p. of solder. The modified flux preferably has the COOH:SiOH mol ratio of 1:(0.5-1.5), and is suitable for the pastes contg. 40-95 wt.% solder. The preferred fluxes contain org. acids (including rosins) and their salts 0.1-20, silicone resin 0.05-80, and solvents 10-99.85 wt.%. The solder pastes show decreased corrosion of Cu, esp. for elec.-**circuit** boards.
ST solder paste flux silicone resin; org acid flux deactivation silicone; rosin flux deactivation silicone; elec **circuit** soldering flux silicone
IT Carboxylic acids, uses
Rosin
RL: USES (Uses)
(flux mixts. contg., for solder pastes, org. acids neutralized by silicone resin in)
IT **Siloxanes** and Silicones, uses
RL: USES (Uses)
(flux mixts. contg., to neutralize org. acids in soldering)
IT Solders
(pastes, silicone resins in fluxes for, to neutralize org. acids and rosins)
IT **Siloxanes** and Silicones, uses
RL: USES (Uses)
(alkyd-, flux mixts. contg., for solder pastes, org. acids neutralized by silicone resin in)
IT **Siloxanes** and Silicones, uses
RL: USES (Uses)
(epoxy, flux mixts. contg., for solder pastes, org. acids neutralized by silicone resin in)
IT Soldering
(fluxes, silicone resins in, to neutralize org. acids and rosins)

IT Castor oil
RL: USES (Uses)
(hydrogenated, flux mixts. contg., for solder pastes, org. acids neutralized by silicone resin in)
IT **Siloxanes** and Silicones, uses
RL: USES (Uses)
(hydroxy-contg., flux mixts. contg., for solder pastes, org. acids neutralized by silicone resin in)
IT **Siloxanes** and Silicones, uses
RL: USES (Uses)
(methoxy, flux mixts. contg., for solder pastes, org. acids neutralized by silicone resin in)
IT Electric **circuits**
(printed, boards, soldering of, fluxes and pastes for, with silicone resins)
IT Alkyd resins
Epoxy resins, uses
RL: USES (Uses)
(**siloxane-**, flux mixts. contg., for solder pastes, org. acids neutralized by silicone resin in)
IT 64-17-5, Ethanol, uses **67-63-0,** Isopropanol, uses 79-14-1, Hydroxyacetic acid, uses 110-15-6, Succinic acid, uses 110-94-1, Glutaric acid 111-20-6, Sebacic acid, uses 123-99-9, Azelaic acid, uses 124-04-9, Adipic acid, uses 141-82-2, Malonic acid, uses 34590-94-8, Dipropylene glycol monomethyl ether 84376-09-0 137592-56-4 146448-14-8
RL: USES (Uses)
(flux mixts. contg., for solder pastes, org. acids neutralized by silicone resin in)
IT 514-10-3, Abietic acid
RL: USES (Uses)
(flux mixts. contg., for soldering, silicone resins for acidity neutralization in)
IT 12610-63-8 62258-61-1 136766-80-8 136766-83-1
RL: USES (Uses)
(solder, flux mixt. for pastes contg. powd., with silicone resin to neutralize org. acids)
IT 7440-50-8, Copper, uses
RL: USES (Uses)
(soldering of, flux mixts. in, with silicone resins to neutralize org. acids and rosin)
RN 64-17-5
RN **67-63-0**
RN 79-14-1
RN 110-15-6
RN 110-94-1
RN 111-20-6
RN 123-99-9
RN 124-04-9
RN 141-82-2
RN 34590-94-8
RN 84376-09-0
RN 137592-56-4
RN 146448-14-8
RN 514-10-3
RN 12610-63-8
RN 62258-61-1
RN 136766-80-8
RN 136766-83-1
RN 7440-50-8

L10 ANSWER 6 OF 16 CAPLUS 

AN 2002:669624 CAPLUS
DN 137:194031
TI Dielectric films for narrow gap-fill applications in integrated-**circuit** fabrication
IN Leung, Roger; Endisch, Denis; Xie, Songyuan; Hacker, Nigel; Deng, Yanpei
PA Honeywell International, Inc., USA
SO U.S., 11 pp.
CODEN: USXXAM
DT Patent
LA English
IC ICM H01L021-44
NCL 438118000
CC 76-3 (Electric Phenomena)
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | US 6444495 | B1 | 20020903 | US 2001-761529 | 20010111 |
| | US 2002137260 | A1 | 20020926 | | |
| | US 2003087485 | A1 | 20030508 | US 2002-188433 | 20020703 |
| PRAI | US 2001-761529 | A3 | 20010111 | | |

AB A colloidal suspension of nanoparticles composed of a dense material dispersed in a solvent was used in forming a gap-filling dielec. material with low thermal shrinkage, high thermal stability, and high etching resistance. The dielec. material is particularly useful for pre-metal dielec. and shallow trench isolation applications. According to the methods of forming a dielec. material, the colloidal suspension is deposited on a substrate and dried to form a porous intermediate layer. The intermediate layer is modified by infiltration with a liq. phase matrix material, such as a spin-on polymer, followed by curing, by infiltration with a gas phase matrix material, followed by curing, or by curing alone, to provide a gap-filling, thermally stable, etch resistant dielec. material.

ST colloidal dielec film spin coating integrated **circuit** fabrication

IT Silsesquioxanes
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(boron-doped; colloidal dielec. films for narrow gap-fill applications in integrated-**circuit** fabrication)

IT Annealing
Colloids
Dielectric films
Drying
Integrated **circuits**
Nitriding
Oxidation
(colloidal dielec. films for narrow gap-fill applications in integrated-**circuit** fabrication)

IT Polymers, processes
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(colloidal dielec. films for narrow gap-fill applications in integrated-**circuit** fabrication)

IT Borosilicates
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(colloidal dielec. films for narrow gap-fill applications in integrated-**circuit** fabrication)

IT Borophosphosilicate glasses
Borosilicate glasses

Phosphosilicate glasses
Polycarbosilanes
**Polysiloxanes**, uses
Silazanes
RL: TEM (Technical or engineered material use); USES (Uses)
(colloidal dielec. films for narrow gap-fill applications in integrated-**circuit** fabrication)

IT Porous materials
(films; colloidal dielec. films for narrow gap-fill applications in integrated-**circuit** fabrication)

IT Silicates, uses
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(phospho-; colloidal dielec. films for narrow gap-fill applications in integrated-**circuit** fabrication)

IT Films
(porous; colloidal dielec. films for narrow gap-fill applications in integrated-**circuit** fabrication)

IT Coating process
(spin; colloidal dielec. films for narrow gap-fill applications in integrated-**circuit** fabrication)

IT 998-30-1, Triethoxysilane
RL: CPS (Chemical process); NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(colloidal dielec. films for narrow gap-fill applications in integrated-**circuit** fabrication)

IT 7440-36-0, Antimony, uses 7440-38-2, Arsenic, uses 7440-42-8, Boron, uses 7723-14-0, Phosphorus, uses
RL: MOA (Modifier or additive use); USES (Uses)
(colloidal dielec. films for narrow gap-fill applications in integrated-**circuit** fabrication)

IT 64-17-5, Ethanol, uses **67-63-0**, Isopropyl alcohol, uses 67-64-1, Acetone, uses 108-94-1, Cyclohexanone, uses 1303-86-2, Boron oxide (B2O3), uses 7697-37-2, Nitric acid, uses 7727-37-9, Nitrogen, uses 30136-13-1, Propoxypropanol
RL: NUU (Other use, unclassified); USES (Uses)
(colloidal dielec. films for narrow gap-fill applications in integrated-**circuit** fabrication)

IT 7631-86-9P, Silica, processes 12125-01-8P, Ammonium fluoride
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(colloidal dielec. films for narrow gap-fill applications in integrated-**circuit** fabrication)

IT 7440-21-3P, Silicon, uses 11105-01-4P, Silicon oxynitride 12033-89-5P, Silicon nitride, uses
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(colloidal dielec. films for narrow gap-fill applications in integrated-**circuit** fabrication)

IT 1344-28-1, Aluminum oxide, uses 6876-41-1D, derivs. 7429-90-5, Aluminum, uses 24304-00-5, Aluminum nitride 153315-81-2, Hydrogen silsesquioxane
RL: TEM (Technical or engineered material use); USES (Uses)
(colloidal dielec. films for narrow gap-fill applications in integrated-**circuit** fabrication)

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE
(1) Fischer; US 6143401 A 2000
(2) Jeng; US 5548159 A 1996
(3) Jeng; US 5858871 A 1999
(4) Mushiake; US 6242135 B1 2001 CAPLUS

(5) Rosenmayer; US 5889104 A 1999 CAPLUS
(6) Ryang; US 5962608 A 1999 CAPLUS
(7) Smith; US 6319852 B1 2001 CAPLUS
(8) Stober; US 3634558 A 1972 CAPLUS
(9) Yamada; US 6245439 B1 2001
(10) Zakhidov; US 6261469 B1 2001 CAPLUS
RN 998-30-1
RN 7440-36-0
RN 7440-38-2
RN 7440-42-8
RN 7723-14-0
RN 64-17-5
RN **67-63-0**
RN 67-64-1
RN 108-94-1
RN 1303-86-2
RN 7697-37-2
RN 7727-37-9
RN 30136-13-1
RN 7631-86-9P
RN 12125-01-8P
RN 7440-21-3P
RN 11105-01-4P
RN 12033-89-5P
RN 1344-28-1
RN 6876-41-1D
RN 7429-90-5
RN 24304-00-5
RN 153315-81-2

L10 ANSWER 7 OF 16 CAPLUS 
AN 1999:412782 CAPLUS
DN 131:65892
TI Manufacture of substrates with patterned polysilane layers
IN Fukushima, Motoo; Mori, Shigeru
PA Shin-Etsu Chemical Industry Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-075
ICS G03F007-32; G03F007-38; H05K003-00
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | JP 11174682 | A2 | 19990702 | JP 1997-362183 | 19971211 |
| | JP 3301370 | B2 | 20020715 | | |
| | US 6110651 | A | 20000829 | US 1998-208588 | 19981210 |
| PRAI | JP 1997-362183 | A | 19971211 | | |

AB The title process involves: (1) formation of polysilane layer on a substrate, (2) selective light irradn. of the layer in presence of a solvent which dissolves **siloxane** but not polysilane, (3) removal of **siloxane** by treatment in a solvent that only dissolves **siloxane**, and (4) complete removal of the solvent. Polysilane may be (R1mR2nXpSi)q [R1-2 = (un)substituted hydrocarbon; X = (un)substituted hydrocarbon, alkoxy, halogen; 1 .ltoreq. m + n + p .ltoreq. 2.2; 10 .ltoreq. q .ltoreq. 100,000; q = integer]. Polysilane patterns are formed with high accuracy. The process is useful in manuf. of printed **circuit** boards, battery electrodes, sensors, etc.

ST polysilane patterning **siloxane** dissoln
IT Photoimaging materials
(manuf. of patterned polysilane by dissoln of **siloxanes** by irradn. in presence of alc.)
IT Polysilanes
RL: PEP (Physical, engineering or chemical process); PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(manuf. of patterned polysilane by dissoln of **siloxanes** by irradn. in presence of alc.)
IT **Polysiloxanes**, processes
RL: PNU (Preparation, unclassified); REM (Removal or disposal); PREP (Preparation); PROC (Process)
(manuf. of patterned polysilane by dissoln of **siloxanes** by irradn. in presence of alc.)
IT Alcohols, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(manuf. of patterned polysilane by dissoln of **siloxanes** by irradn. in presence of alc.)
IT 146088-00-8P, Poly(methylphenylsilane)
RL: PEP (Physical, engineering or chemical process); PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(manuf. of patterned polysilane by dissoln of **siloxanes** by irradn. in presence of alc.)
IT 64-17-5, Ethanol, uses **67-63-0**, Isopropanol, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(manuf. of patterned polysilane by dissoln of **siloxanes** by irradn. in presence of alc.)
RN 146088-00-8P
RN 64-17-5
RN **67-63-0**

L10 ANSWER 8 OF 16 CAPLUS COPYRIGHT 2003 ACS
AN 1976:6867 CAPLUS
DN 84:6867
TI Detergent for cleaning a polymer surface
IN Bratolyubov, A. S.; Rybak, I. K.; Grabovskii, O. Z.; Bykov, M. V.; Goncharenko, G. S.; Lugina, V. P.; Finogeev, N. D.
PA USSR
SO U.S.S.R.
From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1975, 52(36), 67.
CODEN: URXXAF
DT Patent
LA Russian
IC C11D
CC 46-6 (Surface Active Agents and Detergents)
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | SU 486040 | T | 19750930 | SU 1974-2003326 | 19740311 |
| PRAI | SU 1974-2003326 | | 19740311 | | |

AB Mixts. of Cl2FCCClF2 [76-13-1] 35-45, MeCCl3 [71-55-6] 10-20, and aliph. alc. (EtOH [64-17-5] and/or iso-PrOH [**67-63-0**]) 40-50 vol.* were useful for cleaning polymer surfaces (e.g., elec. **circuit** boords) with min. damage to **siloxane** elec. insulation.
ST detergent cleaning **circuit** board; elec **circuit** board cleaning; solvent cleaning **circuit** board; haloalkane cleaning **circuit** board; alc cleaning **circuit** board
IT Detergents
(cleaning solvents, for soldering flux removal from printed

circuits)

IT Electric **circuits**
(printed, soldering flux removal from, solvents for)

IT 64-17-5, uses and miscellaneous **67-63-0**, uses and miscellaneous
71-55-6 76-13-1
RL: TEM (Technical or engineered material use); USES (Uses)
(cleaning compns. contg., for elec. **circuit** boards)

RN 64-17-5
RN **67-63-0**
RN 71-55-6
RN 76-13-1

L10 ANSWER 9 OF 16 CAPLUS COPYRIGHT 2003 ACS
AN 2000:381447 CAPLUS
DN 132:355738
TI Method of reducing spiral defects in glass by adding an isopropyl alcohol rinse step before depositing spin-on glass in integrated-**circuit** fabrication
IN Chiang, Chen-Chia; Lin, Chung-An
PA Taiwan Semiconductor Manufacturing Company, Taiwan
SO U.S., 8 pp.
CODEN: USXXAM
DT Patent
LA English
IC ICM H01L021-31
ICS H01L021-469
NCL 438778000
CC 76-3 (Electric Phenomena)
Section cross-reference(s): 57, 66
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | US 6071831 | A | 20000606 | US 1998-135042 | 19980817 |
| PRAI | US 1998-135042 | | 19980817 | | |

AB A method of forming an interlevel dielec. layer of spin-on-glass is described which avoids spiral defects from occurring in the layer of spin-on-glass. Before the spin-on-glass is deposited and with the wafer spinning at a low angular velocity a 1st vol. of iso-Pr alc. is deposited on the wafer. The wafer continues to spin at the low angular velocity for a short time. With the wafer continuing to spin at the low angular velocity a 2nd vol., less than the 1st vol., of spin-on-glass is deposited on the wafer. The wafer continues to spin at the low angular velocity for a short time and then is spun at a high angular velocity for a longer time. The wafer is then removed from the app. used to deposit the spin-on-glass and processing of the wafer continues. Spiral defects in the layer of spin-on-glass are avoided.

ST spin on glass spiral defect isopropanol rinsing silicon; integrated **circuit** rotation spin glass coating

IT **Polysiloxanes**, processes
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(Me; method of reducing spiral defects in glass by adding iso-Pr alc. rinse step for silicon before depositing spin-on glass in integrated-**circuit** fabrication)

IT Dielectric films
Integrated **circuits**
Rotation
Semiconductor device fabrication
(method of reducing spiral defects in glass by adding iso-Pr alc. rinse step for silicon before depositing spin-on glass in integrated-**circuit** fabrication)

IT Glass, properties

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process); USES (Uses)
(spin on; method of reducing spiral defects in glass by adding iso-Pr alc. rinse step for silicon before depositing spin-on glass in integrated-**circuit** fabrication)

IT Coating process
Washing
(spin; method of reducing spiral defects in glass by adding iso-Pr alc. rinse step for silicon before depositing spin-on glass in integrated-**circuit** fabrication)

IT 7440-21-3, Silicon, processes
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(method of reducing spiral defects in glass by adding iso-Pr alc. rinse step for silicon before depositing spin-on glass in integrated-**circuit** fabrication)

IT 64-17-5, Ethanol, processes **67-63-0**, Isopropyl alcohol, processes 71-36-3, 1-Butanol, processes
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(method of reducing spiral defects in glass by adding iso-Pr alc. rinse step for silicon before depositing spin-on glass in integrated-**circuit** fabrication)

RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE
(1) Akram; US 5925410 1999
(2) Chang; ULSI Technology 1996, P92 CAPLUS
(3) Gardner; US 5535525 1996
(4) Ikeno; US 5264246 1993
(5) Ilg; US 5807792 1998 CAPLUS
(6) Kim; US 5874128 1999
(7) Lin; US 5646071 1997 CAPLUS
(8) Sanada; US 5843527 1998
(9) Sato; US 6022806 2000 CAPLUS
(10) Shirley; US 5912049 1999
(11) Wang; US 5780105 1998
(12) Wilson; US 5990014 1999 CAPLUS
(13) Yen; US 6004622 1999 CAPLUS
(14) Ziger; US 5272118 1993

RN 7440-21-3
RN 64-17-5
RN **67-63-0**
RN 71-36-3

L10 ANSWER 10 OF 16 CAPLUS COPYRIGHT 2003 ACS
AN 2000:861954 CAPLUS
DN 134:20313
TI Vapor deposition for protective coating on spherical solder-alloy powders
IN Minogue, Gerard R.
PA Alpha Metals, Inc., USA
SO PCT Int. Appl., 16 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM H01L021-48
ICS H01L023-498; H05K003-34; B23K035-02
CC 56-9 (Nonferrous Metals and Alloys)
Section cross-reference(s): 76
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 2000074132 | A1 | 20001207 | WO 2000-US15220 | 20000601 |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 6506448 B1 20030114 US 2000-584674 20000531

EP 1232524 A1 20020821 EP 2000-938067 20000601

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL

PRAI US 1999-137031P P 19990601
US 2000-584674 A2 20000531
WO 2000-US15220 W 20000601

AB The surface of spherical solder-alloy powder is coated by vapor deposition using a soln. contg.: (a) volatile org. solvent; (b) low-viscosity oil or org. acid at nominally 0.05-5.0%; and (c) a surfactant at 0.01-1.0%, and optional flux and/or UV-fluorescent dye. The solder-alloy powder in a chamber is dipped into the coating soln. in a vapor-tight 2nd chamber, and after a predetd. time is removed, placed into 3rd vapor-tight low-pressure chamber, and heated to 54-121.degree. to vaporize the residual solvent with optional recovery. The coated alloy powder can be stored without corrosion, and can be used in elec. conducting solder pastes or adhesives. The coated solder spheres are suitable for assembly of elec. **circuit** boards with surface-mounted electronic parts, followed by heating for reflow soldering. The typical coating soln. contains AcOH as the solvent, paraffin oil or isostearic acid as the low-viscosity addn., simethicone as the surfactant, and a polar or nonpolar flux.

ST solder alloy ball protective coating soln; elec **circuit** assembly coated solder ball

IT Fluorescent dyes
(UV-, coating contg.; soln. for vapor deposition of protective coating on spherical solder-alloy powders)

IT Electric **circuits**
(assemblies, spherical solder for; soln. for vapor deposition of protective coating on spherical solder-alloy powders)

IT Lubricating oils
Surfactants
(coating contg.; soln. for vapor deposition of protective coating on spherical solder-alloy powders)

IT Paraffin oils
**Polysiloxanes**, uses
RL: MOA (Modifier or additive use); USES (Uses)
(coating contg.; soln. for vapor deposition of protective coating on spherical solder-alloy powders)

IT **Cyclosiloxanes**
RL: MOA (Modifier or additive use); USES (Uses)
(di-Me, surfactant, coating bath contg.; soln. for vapor deposition of protective coating on spherical solder-alloy powders)

IT Polyolefins
RL: MOA (Modifier or additive use); USES (Uses)
(oil, coating contg.; soln. for vapor deposition of protective coating on spherical solder-alloy powders)

IT Solders
(spheres, coating of; soln. for vapor deposition of protective coating on spherical solder-alloy powders)

IT 64-17-5, Ethanol, uses **67-63-0**, Isopropanol, uses 67-64-1, Acetone, uses 79-01-6, Trichloroethylene, uses 106-94-5, n-Propyl bromide 124-04-9, Adipic acid, uses 30399-84-9, Isostearic acid
RL: MOA (Modifier or additive use); USES (Uses)

(coating bath contg.; soln. for vapor deposition of protective coating on spherical solder-alloy powders)

IT 541-02-6, **Decamethylcyclopentasiloxane** 8050-81-5, Simethicone
RL: MOA (Modifier or additive use); USES (Uses)
(surfactant, coating bath contg.; soln. for vapor deposition of protective coating on spherical solder-alloy powders)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE


(1) Fry Metals Inc; WO 9701414 A 1997 CAPLUS
(2) Fujitsu Ltd; EP 0539211 A 1993
(3) Murata Manufacturing Co; EP 0905775 A 1999
(4) Union Carbide Chem Plastic; EP 0556864 A 1993 CAPLUS


RN 64-17-5
RN **67-63-0**
RN 67-64-1
RN 79-01-6
RN 106-94-5
RN 124-04-9
RN 30399-84-9
RN 541-02-6
RN 8050-81-5

L10 ANSWER 11 OF 16 CAPLUS COPYRIGHT 2003 ACS
AN 1996:437814 CAPLUS
DN 125:89676
TI Cleaning agent, method and equipment
IN Kumagai, Masaru; Shimozawa, Hiroshi; Oguni, Naoyuki; Inada, Minoru; Saito, Nobuhiro; Yamafuji, Shigeo; Shimizu, Chiyuki; Umehara, Kazunori
PA Kabushiki Kaisha Toshiba, Japan; Toshiba Silicone Co., Ltd.
SO PCT Int. Appl., 124 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
IC ICM B08B003-08
CC 46-6 (Surface Active Agents and Detergents)
Section cross-reference(s): 76

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 9612571 | A1 | 19960502 | WO 1995-JP2149 | 19951019 |
| | W: CN, JP, KR, US | | | | |
| | RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| | EP 787537 | A1 | 19970806 | EP 1995-934846 | 19951019 |
| | R: DE, ES, FR, GB, IT, NL | | | | |
| | CN 1170374 | A | 19980114 | CN 1995-196867 | 19951019 |
| | JP 3002261 | B2 | 20000124 | JP 1996-513771 | 19951019 |
| PRAI | JP 1994-253487 | A | 19941019 | | |
| | JP 1994-253488 | A | 19941019 | | |
| | JP 1994-253489 | A | 19941019 | | |
| | JP 1994-253490 | A | 19941019 | | |
| | JP 1994-253491 | A | 19941019 | | |
| | JP 1994-253492 | A | 19941019 | | |
| | JP 1995-84066 | A | 19950410 | | |
| | JP 1995-108410 | A | 19950502 | | |
| | JP 1995-108411 | A | 19950502 | | |
| | JP 1995-108412 | A | 19950502 | | |
| | WO 1995-JP2149 | W | 19951019 | | |


AB The title cleaning agent can substitute for chlorofluorocarbon or chlorinated solvents. In particular, the method is for cleaning electronics parts such as printed boards or mounted parts or metallic parts, and is possible to remove various contaminants from the parts and dry the same to the extent comparative to that of the method of cleaning

with chlorofluorocarbon or chlorinated solvents. Examples of the cleaning agent include polar cleaning agents with a soly. parameter of .gtoreq.9 or a permittivity of .gtoreq.4, mixts. thereof with other cleaning agents with a soly. parameter of <9 and a permittivity of <4, and cleaning agents contg. as the active ingredient an azeotropic or pseudoazeotropic compn. contg. a low-mol.-wt. **siloxane** compd. The cleaning method is characterized by comprising .gtoreq.1 step selected from the group consisting of the step of cleaning the object with a polar cleaning agent having a soly. parameter of .gtoreq.9 or a permittivity of .gtoreq.4, the step of rinsing the object with a mixt. of the above polar cleaning agent with another cleaning agent having a soly. parameter of <9 and a permittivity of <4, and the drying step.

ST polar cleaning agent electronic part; azeotropic **siloxane** cleaning compn; pseudoazeotropic **siloxane** cleaning compn; chlorofluorocarbon substitute cleaning agent; chlorinated solvent substitute cleaning agent; fluorocarbon cleaning agent electronic part; water drying agent app

IT Drying apparatus
Electric apparatus
(cleaning agent, method and equipment for electron parts)

IT Hydrocarbons, uses
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(cleaning agent, method and equipment for electron parts)

IT Acetals
Alcohols, uses
Amides, uses
Amines, uses
Anhydrides
**Cyclosiloxanes**
Esters, uses
Ethers, uses
Glycols, uses
Ketones, uses
Nitriles, uses
Perfluorocarbons
Phenols, uses
Quaternary ammonium compounds, uses
Sulfoxides
RL: TEM (Technical or engineered material use); USES (Uses)
(cleaning agent, method and equipment for electron parts)

IT **Siloxanes** and Silicones, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(low-mol.-wt.; cleaning agent, method and equipment for electron parts)

IT Degreasing
(agents, cleaning agent, method and equipment for electron parts)

IT Cleaning
(app., cleaning agent, method and equipment for electron parts)

IT Detergents
(azeotropic, cleaning agent, method and equipment for electron parts)

IT Hydrocarbons, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(chloro fluoro, cleaning agent, method and equipment for electron parts)

IT Detergents
(cleaning compns., cleaning agent, method and equipment for electron parts)

IT Detergents
(cleaning compns., spray, cleaning agent, method and equipment for electron parts)

IT Hydrocarbons, uses
RL: PRP (Properties); TEM (Technical or engineered material use); USES

(Uses)
(fluoro, cleaning agent, method and equipment for electron parts)

IT Alcohols, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(fluoro, cleaning agent, method and equipment for electron parts)

IT Perhalocarbons
RL: TEM (Technical or engineered material use); USES (Uses)
(fluoroiodo, cleaning agent, method and equipment for electron parts)

IT Electric **circuits**
(printed, boards, cleaning agent, method and equipment for electron parts)

IT 178820-74-1 178820-75-2 178820-76-3 178820-77-4 178820-78-5 178820-79-6 178820-80-9 178820-81-0
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(azeotropic; cleaning agent, method and equipment for electron parts)

IT 64-17-5, Ethanol, uses 64-19-7, Acetic acid, uses **67-63-0**, 2-Propanol, uses 67-64-1, Acetone, uses 71-23-8, 1-Propanol, uses 75-05-8, Acetonitrile, uses 75-52-5, Nitromethane, uses 75-65-0, tert-Butanol, uses 75-85-4, tert-Pentyl alcohol 75-89-8 76-05-1, Trifluoroacetic acid, uses 78-82-0, Isobutyronitrile 78-93-3, Methyl ethyl ketone, uses 79-24-3, Nitroethane 96-22-0, 3-Pentanone 105-37-3, Ethyl propionate 107-12-0, Propionitrile 107-15-3, Ethylenediamine, uses 107-46-0, **Hexamethyldisiloxane** 107-51-7, **Octamethyltrisiloxane** 108-21-4, Isopropyl acetate 109-60-4, Propyl acetate 109-73-9, Butylamine, uses 109-74-0, Butyronitrile 109-86-4, 2-Methoxyethanol 109-99-9, THF, uses 110-01-0, Thiophane 110-71-4, 1,2-Dimethoxyethane 110-85-0, Piperazine, uses 110-91-8, Morpholine, uses 111-27-3, 1-Hexanol, uses 112-34-5, Diethylene glycol monobutyl ether 123-51-3, Isopentyl alcohol 123-86-4, Butyl acetate 138-22-7, Butyl lactate 141-78-6, Ethyl acetate, uses 141-79-7, Mesityl oxide 307-34-6 335-57-9, Fluorinert PF 5070 352-93-2, Diethyl sulfide 355-42-0 378-94-9, Perfluoromorpholine 382-28-5 422-56-0 542-55-2, Isobutyl formate 556-67-2, **Octamethylcyclotetrasiloxane** 583-59-5, 2-Methylcyclohexanol 591-78-6, 2-Hexanone 872-50-4, NMP, uses 1320-67-8 3452-97-9, 3,5,5-Trimethylhexanol 7664-38-2, Phosphoric acid, uses 51000-94-3 52125-53-8, Propylene glycol monoethyl ether 56539-66-3, 3-Methoxy-3-methyl-1-butanol 75330-23-3 111109-77-4, Dipropylene glycol dimethyl ether 139063-93-7
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(cleaning agent, method and equipment for electron parts)

RN 178820-74-1
RN 178820-75-2
RN 178820-76-3
RN 178820-77-4
RN 178820-78-5
RN 178820-79-6
RN 178820-80-9
RN 178820-81-0
RN 64-17-5
RN 64-19-7
RN **67-63-0**
RN 67-64-1
RN 71-23-8
RN 75-05-8
RN 75-52-5
RN 75-65-0
RN 75-85-4
RN 75-89-8
RN 76-05-1

RN 78-82-0
RN 78-93-3
RN 79-24-3
RN 96-22-0
RN 105-37-3
RN 107-12-0
RN 107-15-3
RN 107-46-0
RN 107-51-7
RN 108-21-4
RN 109-60-4
RN 109-73-9
RN 109-74-0
RN 109-86-4
RN 109-99-9
RN 110-01-0
RN 110-71-4
RN 110-85-0
RN 110-91-8
RN 111-27-3
RN 112-34-5
RN 123-51-3
RN 123-86-4
RN 138-22-7
RN 141-78-6
RN 141-79-7
RN 307-34-6
RN 335-57-9
RN 352-93-2
RN 355-42-0
RN 378-94-9
RN 382-28-5
RN 422-56-0
RN 542-55-2
RN 556-67-2
RN 583-59-5
RN 591-78-6
RN 872-50-4
RN 1320-67-8
RN 3452-97-9
RN 7664-38-2
RN 51000-94-3
RN 52125-53-8
RN 56539-66-3
RN 75330-23-3
RN 111109-77-4
RN 139063-93-7

L10 ANSWER 12 OF 16 CAPLUS COPYRIGHT 2003 ACS
AN 2001:731251 CAPLUS
DN 135:281843
TI Method of producing a multilayered wiring board with small area via holes
IN Toyoshima, Toshiyuki; Yanaura, Satoshi; Furuhashi, Yasuo; Fujioka, Hirofumi
PA Japan
SO U.S. Pat. Appl. Publ., 18 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM H05K003-02
ICS H05K003-10
NCL 029852000

CC 76-14 (Electric Phenomena)
Section cross-reference(s): 38

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | US 2001025414 | A1 | 20011004 | US 2000-738855 | 20001218 |
| | JP 2001284813 | A2 | 20011012 | JP 2000-97250 | 20000331 |
| PRAI | JP 2000-97250 | A | 20000331 | | |

AB Method of producing a multilayered wiring board comprising the steps of subjecting the photosensitive resin to exposure- and development-treatment to form the holes having a predetd. size and shape; depositing and forming the curable resin to the insulating layer having the holes formed therein in such a manner as to bury the holes, and conducting heat-treatment to form the cured thin film of the curable resin on the surface of the insulating layer; and so removing the curable resin as to leave the cured thin film to obtain the via-holes having the reduced opening size by the cured thin film.

ST printed **circuit** board via hole polymer resin

IT Polyvinyl acetals
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(S-Lec KW 3; method of producing multilayered wiring board with small area via holes)

date?

IT Epoxy resins, processes
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(acrylates; method of producing multilayered wiring board with small area via holes)

IT Coating process
Contact holes
Crosslinking
Dielectric films
Heat treatment
Printed **circuit** boards
(method of producing multilayered wiring board with small area via holes)

IT Acrylic polymers, processes
Aminoplasts
Butadiene rubber, processes
Phenolic resins, processes
**Polysiloxanes**, processes
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(method of producing multilayered wiring board with small area via holes)

IT Epoxy resins, processes
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(photosensitive; method of producing multilayered wiring board with small area via holes)

IT Interconnections (electric)
(vias; method of producing multilayered wiring board with small area via holes)

IT 25068-38-6
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(E 1001; method of producing multilayered wiring board with small area via holes)

IT 9003-17-2
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(butadiene rubber, method of producing multilayered wiring board with

small area via holes)

IT 362660-00-2, CPC 8000
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(copper paste; method of producing multilayered wiring board with small area via holes)

IT 1310-73-2, Sodium hydroxide, processes
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(developer; method of producing multilayered wiring board with small area via holes)

IT **67-63-0**, Isopropanol, processes 111-76-2, Butyl cellosolve 7738-94-5, Chromic acid (H2CrO4)
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(method of producing multilayered wiring board with small area via holes)

IT 471-34-1, Calcium carbonate, processes 621-82-9D, Cinnamic acid, esters 2669-72-9, MX 280 9003-08-1, Cymel 370 9003-18-3, Butadiene-acrylonitrile copolymer 58607-87-7 71868-10-5, Irgacure 907 115166-29-5, Epikote 180 210106-42-6, XP 9500CC 362660-64-8, JSR-KS 22 362660-65-9, Probelec XB 7081
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(method of producing multilayered wiring board with small area via holes)

IT 362658-73-9, OM 950
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(neutralizing agent; method of producing multilayered wiring board with small area via holes)

RN 25068-38-6
RN 9003-17-2
RN 362660-00-2
RN 1310-73-2
RN **67-63-0**
RN 111-76-2
RN 7738-94-5
RN 471-34-1
RN 621-82-9D
RN 2669-72-9
RN 9003-08-1
RN 9003-18-3
RN 58607-87-7
RN 71868-10-5
RN 115166-29-5
RN 210106-42-6
RN 362660-64-8
RN 362660-65-9
RN 362658-73-9

L10 ANSWER 13 OF 16 CAPLUS COPYRIGHT 2003 ACS
AN 1999:650669 CAPLUS
DN 131:275831
TI Automated detection and reporting of volatile organic compounds (VOCs) in complex environments
AU Hargis, P. J., Jr.; Preppernau, B. L.; Osbourn, G. C.; Ricco, A. J.; Frye, G. C.
CS Laser, Optics and Remote Sensing Department, Sandia National Laboratories, Albuquerque, NM, 87185-1423, USA
SO Sandia National Laboratories [Technical Report] SAND (1997), SAND97-0509, i-vii, 1-18

CODEN: SNLSDT
DT Report
LA English
CC 59-1 (Air Pollution and Industrial Hygiene)
Section cross-reference(s): 47, 80
AB Results of work to develop volatile org. compd. (VOC) sensing systems based on 2 complementary techniques are discussed. The first technique used a gated channeltron detector for resonant laser-induced multiphoton photoionization detection of trace org. vapors in a supersonic mol. beam. The channeltron was gated using a relatively simple **circuit** to generate a neg. gate pulse with a width of 400 ns (FWHM), a 50 ns turn-on (rise) time, a 1.5 .mu.s turn-off (decay) time, a pulse amplitude of -1000 V, and a DC offset adjustable from 0 to -1500 V. This gated channeltron rejects spurious responses to UV laser light scattered directly into the channeltron and time-delayed ionization signals induced by photoionization of residual gas in the vacuum chamber. Detection limits in the part-per-trillion range were demonstrated with the gated detector. The second technique used arrays of surface acoustic wave (SAW) devices coated with various chem. selective materials (e.g., polymers, self-assembled monolayers) to provide unique response patterns to various chem. analytes. This work focused on polymers, formed by spin casting from soln. or by plasma polymn., as well as on self-assembled monolayers. Response from coated SAW to various concns. of water, VOC, and organophosphonates (chem. warfare agent simulants) were used for calibration data. A novel visual empirical region of influence (VERI) pattern recognition technique was used to evaluate the ability to use these response patterns to correctly identify chem. species. This study showed how the VERI technique can be used to det. the best set of coatings materials, and to identify unknown analytes based on previous calibration data.
ST volatile org detn monitoring air analysis; chem sensor automated volatile org detn monitoring; laser induced multiphoton ionization volatile org detection; surface acoustic wave sensor volatile org detection
IT Air analysis
Sensors
(automated volatile org. compd. and mixt. detn. and monitoring in air using laser-induced multiphoton ionization and surface acoustic wave microsensor array-equipped chem. sensors)
IT Volatile organic compounds
RL: ANT (Analyte); POL (Pollutant); ANST (Analytical study); OCCU (Occurrence)
(automated volatile org. compd. and mixt. detn. and monitoring in air using laser-induced multiphoton ionization and surface acoustic wave microsensor array-equipped chem. sensors)
IT **Polysiloxanes**, uses
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(cyanide-modified; sensor coating; automated volatile org. compd. and mixt. detn. and monitoring in air using laser-induced multiphoton ionization and surface acoustic wave microsensor array-equipped chem. sensors)
IT Polyoxyalkylenes, uses
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(fluorine- and sulfo-contg., ionomers, sensor coating; automated volatile org. compd. and mixt. detn. and monitoring in air using laser-induced multiphoton ionization and surface acoustic wave microsensor array-equipped chem. sensors)
IT Polyoxyalkylenes, uses
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(fluorine-contg., sulfo-contg., ionomers, sensor coating; automated volatile org. compd. and mixt. detn. and monitoring in air using

laser-induced multiphoton ionization and surface acoustic wave microsensor array-equipped chem. sensors)

IT Alcohols, uses
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(polyhydric, fluoro, sensor coating; automated volatile org. compd. and mixt. detn. and monitoring in air using laser-induced multiphoton ionization and surface acoustic wave microsensor array-equipped chem. sensors)

IT Fluoropolymers, uses
Fluoropolymers, uses
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(polyoxyalkylene-, sulfo-contg., ionomers, sensor coating; automated volatile org. compd. and mixt. detn. and monitoring in air using laser-induced multiphoton ionization and surface acoustic wave microsensor array-equipped chem. sensors)

IT Ionomers
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(polyoxyalkylenes, fluorine- and sulfo-contg., sensor coating; automated volatile org. compd. and mixt. detn. and monitoring in air using laser-induced multiphoton ionization and surface acoustic wave microsensor array-equipped chem. sensors)

IT 56-23-5, analysis 67-56-1, Methanol, analysis **67-63-0**, Isopropanol, analysis 67-64-1, 2-Propanone, analysis 67-66-3, Chloroform, analysis 71-23-8, n-Propanol, analysis 71-43-2, Benzene, analysis 78-93-3, Methyl ethyl ketone, analysis 79-01-6, Trichloroethylene, analysis 108-88-3, Toluene, analysis 110-54-3, Hexane, analysis 110-82-7, Cyclohexane, analysis 127-18-4, Perchloroethylene, analysis 464-07-3, Pinacolyl alcohol 756-79-6, Dimethyl methyl phosphonate 1445-75-6, Diisopropyl methyl phosphonate 5989-27-5 26635-64-3, Isooctane
RL: ANT (Analyte); POL (Pollutant); ANST (Analytical study); OCCU (Occurrence)
(automated volatile org. compd. and mixt. detn. and monitoring in air using laser-induced multiphoton ionization and surface acoustic wave microsensor array-equipped chem. sensors)

IT 24937-05-1, Polyethylene glycol adipate
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(cyanide-modified; sensor coating; automated volatile org. compd. and mixt. detn. and monitoring in air using laser-induced multiphoton ionization and surface acoustic wave microsensor array-equipped chem. sensors)

IT 79-10-7, 2-Propenoic acid, uses
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(plasma-grafted; sensor coating; automated volatile org. compd. and mixt. detn. and monitoring in air using laser-induced multiphoton ionization and surface acoustic wave microsensor array-equipped chem. sensors)

IT 97-53-0, Eugenol 9002-98-6, Poly(ethylenimine) 9003-20-7, Poly(vinyl acetate) 9003-27-4, Polyisobutylene 9004-57-3, Ethyl cellulose 24969-06-0, Poly(epichlorohydrin) 25035-84-1, Poly(vinyl propionate) 25791-89-3 28212-48-8, Poly(diphenoxy phosphazene) 135311-44-3
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(sensor coating; automated volatile org. compd. and mixt. detn. and monitoring in air using laser-induced multiphoton ionization and surface acoustic wave microsensor array-equipped chem. sensors)

RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE
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(2) Baker, R; Electron Lett 1993, V29, P56
(3) Baker, R; Rev Sci Instrum 1993, V64, P1655
(4) Breen, P; J Chem Phys 1987, V87, P1917 CAPLUS
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(6) Frye, G; Proc 1993 Ultrasonics Symposium 1993, P379
(7) Gostein, M; Rev Sci Instrum 1994, V65, P3036 CAPLUS
(8) Hand, D; Discrimination and Classification 1981
(9) Osbourn, G; Pattern Recognition 1995, V28(11), P1793
(10) Ricco, A; ACS Symposium Series No 561 1994, P264 CAPLUS
(11) Ricco, A; Technical Digest 1994 Solid-State Sensor and Actuator Workshop 1994, P180
(12) Rose-Pehrsson, S; Anal Chem 1988, V60, P2801 CAPLUS
(13) Tanada, T; Ber Bunsenges Phys Chem 1993, V97, P1516 CAPLUS
(14) Wang, X; Sensors and Actuators 1993, VB13, P455

RN 56-23-5
RN 67-56-1
RN **67-63-0**
RN 67-64-1
RN 67-66-3
RN 71-23-8
RN 71-43-2
RN 78-93-3
RN 79-01-6
RN 108-88-3
RN 110-54-3
RN 110-82-7
RN 127-18-4
RN 464-07-3
RN 756-79-6
RN 1445-75-6
RN 5989-27-5
RN 26635-64-3
RN 24937-05-1
RN 79-10-7
RN 97-53-0
RN 9002-98-6
RN 9003-20-7
RN 9003-27-4
RN 9004-57-3
RN 24969-06-0
RN 25035-84-1
RN 25791-89-3
RN 28212-48-8
RN 135311-44-3

L10 ANSWER 14 OF 16 CAPLUS COPYRIGHT 2003 ACS
AN 1998:282379 CAPLUS
DN 128:329869
TI Technique for the removal of residual spin-on-glass (SOG) after full SOG etchback
IN Wu, Lin-june; Yu, Chen-hua Douglas; Lee, Jin-yuan
PA Taiwan Semiconductor Manufacturing Company, Ltd., Taiwan
SO U.S., 9 pp.
CODEN: USXXAM
DT Patent
LA English
IC ICM H01L021-4763
NCL 438624000
CC 76-3 (Electric Phenomena)
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI US 5747381 | A | 19980505 | US 1996-599770 | 19960212 |
| PRAI US 1996-599770 | | 19960212 | | |

AB This invention relates to a method for removing residual spin-on-glass (SOG) during a planarization processing step wherein the SOG is used as a sacrificial planarization medium and subjected to a full etchback to an underlying interlevel dielec. (ILD) layer. The SOG is applied over the ILD layer, and etched back into the ILD layer by reactive-ion-etching under conditions of comparable etch rates for both SOG and ILD. At endpoint there some residual pockets of SOG can be present as well as a region of SOG along the edges of the wafer where it is clamped in the etchback tool. The residual SOG must be removed completely to avoid SOG cracking after thermal processing and SOG outgassing during subsequent metal deposition. For this purpose an aq. etch consisting of hydrofluoric acid buffered with ammonium fluoride is used. The etchant compn. chosen exhibits a selectivity for SOG over the ILD glass of greater than 40 making it suitable for removing considerable SOG residues with minimal attack of the ILD.

ST spin on glass removal planarization IC

IT Etching
(anisotropic; technique for removal of residual spin-on-glass (SOG) after full SOG etchback)

IT Sputtering
(etching, reactive; technique for removal of residual spin-on-glass (SOG) after full SOG etchback)

IT Glass, processes
RL: PEP (Physical, engineering or chemical process); REM (Removal or disposal); PROC (Process)
(spin on; technique for removal of residual spin-on-glass (SOG) after full SOG etchback)

IT Etching
(sputter, reactive; technique for removal of residual spin-on-glass (SOG) after full SOG etchback)

IT Borophosphosilicate glasses
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(technique for removal of residual spin-on-glass (SOG) after full SOG etchback)

IT Silicates, processes
**Siloxanes** (nonpolymeric)
RL: PEP (Physical, engineering or chemical process); REM (Removal or disposal); PROC (Process)
(technique for removal of residual spin-on-glass (SOG) after full SOG etchback contg.)

IT Integrated **circuits**
MOSFET (transistors)
Semiconductor device fabrication
(technique for removal of residual spin-on-glass (SOG) after full SOG etchback for)

IT Dielectric films
(technique for removal of residual spin-on-glass (SOG) formed on an ILD layer)

IT Phosphosilicate glasses
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(technique for removal of residual spin-on-glass (SOG) formed on an ILD layer contg.)

IT **67-63-0**, Isopropyl alcohol., uses
RL: NUU (Other use, unclassified); USES (Uses)
(technique for removal of residual spin-on-glass (SOG) after full SOG etchback)

IT 7631-86-9, Silica, processes
RL: PEP (Physical, engineering or chemical process); PROC (Process)

(technique for removal of residual spin-on-glass (SOG) formed on an ILD layer contg.)
IT 12125-01-8, Ammonium fluoride
RL: NUU (Other use, unclassified); USES (Uses)
(technique for removal of residual spin-on-glass (SOG) hydrofluoric acid buffered with)
IT 75-73-0, Tetrafluoromethane
RL: NUU (Other use, unclassified); USES (Uses)
(technique for removal of residual spin-on-glass (SOG) with)
IT 7664-39-3, Hydrofluoric acid, uses
RL: NUU (Other use, unclassified); USES (Uses)
(technique for removal of residual spin-on-glass (SOG) with ammonium fluoride-buffered)
IT 18130-74-0, Bifluoride (HF21-)
RL: MSC (Miscellaneous)
(technique for removal of residual spin-on-glass (SOG) with ammonium fluoride-buffered hydrofluoric acid)
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

(1) Leong; US 5192697 1993 CAPLUS
(2) Matsuura; US 5459105 1995 CAPLUS
(3) Tanigawa; US 5328871 1994

RN **67-63-0**
RN 7631-86-9
RN 12125-01-8
RN 75-73-0
RN 7664-39-3
RN 18130-74-0

L10 ANSWER 15 OF 16 CAPLUS COPYRIGHT 2003 ACS
AN 1999:100665 CAPLUS
DN 130:126985
TI Fluid property investigation by impedance characterization of quartz crystal resonators. Part I: Methodology, crystal screening, and Newtonian fluids
AU Nwankwo, E.; Durning, C. J.
CS DuPont Experimental Station, Advanced process Control and Optimization Group, Wilmington, DE, 19880-0101, USA
SO Sensors and Actuators, A: Physical (1999), A72(2), 99-109
CODEN: SAAPEB; ISSN: 0924-4247
PB Elsevier Science S.A.
DT Journal
LA English
CC 48-11 (Unit Operations and Processes)
Section cross-reference(s): 37, 76
AB In the first of this two-part communication, we present a methodol. for the application of thickness shear mode (TSM) quartz crystal resonators (QCR) in fluid property investigation. To this end, we outline a protocol for the prepn. of crystal surfaces for fluid contact and establish a methodol. for the pre-screening of quartz crystals for application in fluid property investigation. We also present a data fitting algorithm which enables the conversion of raw impedance data into equiv. **circuit** parameters. Subsequently, we report on our study of a series of Newtonian fluids (2-propanol/water solns.) by frequency response anal. of the fluid-contacted TSM QCR. The results are analyzed in comparison to theor. predictions presented in an earlier publication. The results show good agreement between the theory and exptl. derived equiv. **circuit** parameters. The influence of fluid elasticity on the impedance response of liq.-contacted thickness-shear mode (TSM) quartz crystal resonators (QCR) is investigated in the second part. Model predictions are compared to exptl. results on a series of a TSM QCR contacted with poly(**dimethylsiloxane**) fractions. The findings

show that with appropriate instrumentation and models to interpret results, TSM QCR can be rapid and effective tools in viscoelastic fluid property investigation.

ST crystal screening quartz resonator fluid property detn; thickness shear mode quartz crystal resonator

IT Algorithm
(data fitting; fluid property detn. by impedance of quartz crystal resonators)

IT Acoustic impedance
Electric impedance
Shear
Thickness
Viscoelastic materials
(fluid property detn. by impedance of quartz crystal resonators)

IT Resonators
(piezoelec.; fluid property detn. by impedance of quartz crystal resonators)

IT 14808-60-7, Quartz, uses
RL: DEV (Device component use); USES (Uses)
(fluid property detn. by impedance of quartz crystal resonators)

IT **67-63-0**, 2-Propanol, uses 7732-18-5, Water, uses
RL: NUU (Other use, unclassified); USES (Uses)
(fluid property detn. by impedance of quartz crystal resonators)

RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE
(1) Anon; Personal Communication from E Stockton 1995
(2) Bottom, V; Introduction to Quartz Crystal Unit Design 1982
(3) Ikeda, T; Fundamentals of Piezoelectricity 1990
(4) Martin, S; Anal Chem 1993, V65, P2910 CAPLUS
(5) Nomura, T; Anal Chim Acta 1980, V115, P323 CAPLUS
(6) Nwankwo, E; D Eng Sc Dissertation Chemical Engineering Department Columbia University 1996
(7) Nwankwo, E; Rev Sci Instr 1998, V69(6), P2375 CAPLUS
(8) Reed, C; J Appl Phys 1990, V68, P1993 CAPLUS
(9) Salt, D; Hy-Q Handbook of Quartz Crystal Devices 1987
(10) Sauerbrey, G; Z Physik 1959, V155, P206 CAPLUS
(11) Stephan, K; Recommended Data of Selected Compounds and Binary Mixtures 1990, VIV
(12) Tiersten, H; Linear Piezoelectric Plate Vibrations 1969

RN 14808-60-7
RN **67-63-0**
RN 7732-18-5

L10 ANSWER 16 OF 16 CAPLUS COPYRIGHT 2003 ACS
AN 2001:1253 CAPLUS
DN 134:79701
TI Process for depositing a low dielectric constant film
IN Moghadam, Farhad; Cheung, David W.; Yieh, Ellie; Xia, Li-qun; Yau, Wai-Fan; Lang, Chi-I.; Jeng, Shin-Puu; Gaillard, Frederick; Venkataraman, Shankar; Nemani, Srinivas D.
PA Applied Materials, Inc., USA
SO Eur. Pat. Appl., 20 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM H01L021-316
ICS C23C016-40
CC 76-3 (Electric Phenomena)
Section cross-reference(s): 75

FAN.CNT 8

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|

PI EP 1063692 A1 20001227 EP 2000-112820 20000616
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO
US 6413583 B1 20020702 US 1999-338470 19990622
PRAI US 1999-338470 A 19990622 6054379
US 1998-21788 A2 19980211 6348725
US 1999-247381 A2 19990210 ?

AB A method is presented for depositing Si oxide layers having a low dielec. const. by reaction of an organosilicon compd. and a hydroxyl forming compd. at a substrate temp. .ltorsim.400.degree.. The low dielec. const. films contain residual C and are useful for gap fill layers, pre-metal dielec. layers, inter-metal dielec. layers, and shallow trench isolation dielec. layers in sub-micrometer devices. The hydroxyl compd. can be prepd. prior to deposition from H2O or an org. compd. The Si oxide layers are preferably deposited at a substrate temp. .ltorsim.40.degree. onto a liner layer produced from the organosilicon compd. to provide gap fill layers having a dielec. const. .ltorsim.3.0.

ST plasma vapor deposition process dielec film

IT Semiconductor devices
(microscale, submicron; process for depositing a low dielec. const. film)

IT Vapor deposition process
(plasma; process for depositing a low dielec. const. film)

IT Dielectric films
Integrated **circuits**
Semiconductor device fabrication
(process for depositing a low dielec. const. film)

IT 7631-86-9, Silica, processes
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(process for depositing a low dielec. const. film)

IT 64-19-7, Acetic acid, processes **67-63-0**, Isopropyl alcohol, processes 7722-84-1, Hydrogen peroxide, processes 74087-85-7, Dimethyldioxirane
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(vapor deposition hydroxyl-forming compd.; process for depositing a low dielec. const. film)

IT 75-76-3, Tetramethylsilane 78-10-4, Tetraethoxysilane 291-27-0, 1,3,5-Trisilacyclohexane 293-36-7, 1,5-Dioxa-2,4,6,8-tetrasilacyclooctane 992-94-9, Methylsilane 993-07-7, Trimethylsilane 1111-74-6, Dimethylsilane 1759-88-2 3277-26-7, 1,1,3,3-**Tetramethyldisiloxane** 4364-07-2 4405-22-5 4745-36-2 5654-05-7 6166-86-5, 2,4,6,8,10-**Pentamethylcyclopentasiloxane** 14396-21-5 78570-62-4 234772-32-8 234772-34-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(vapor deposition precursor; process for depositing a low dielec. const. film)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE
(1) Applied Materials Inc; WO 9941423 A 1999 CAPLUS
(2) Ikeda, Y; US 5593741 A 1997 CAPLUS
(3) Laxman, R; US 5492736 A 1996 CAPLUS
(4) Mitsubishi Electric Corp; DE 19804375 A 1999 CAPLUS
(5) Morita, K; US 5360646 A 1994 CAPLUS

RN 7631-86-9
RN 64-19-7
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RN 75-76-3
RN 78-10-4

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RN    291-27-0
RN    293-36-7
RN    992-94-9
RN    993-07-7
RN    1111-74-6
RN    1759-88-2
RN    3277-26-7
RN    4364-07-2
RN    4405-22-5
RN    4745-36-2
RN    5654-05-7
RN    6166-86-5
RN    14396-21-5
RN    78570-62-4
RN    234772-32-8
RN    234772-34-0

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L13 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 2000:419060 CAPLUS
DN 133:273888
TI Covalent bonding of coumarin molecules to sol-gel matrices for organic light-emitting device applications
AU Karkkainen, Ari H. O.; Hormi, Osmo E. O.; Rantala, Juha T.
CS VTT Electronics, Oulu, Finland
SO Proceedings of SPIE-The International Society for Optical Engineering (2000), 3943(Sol-Gel Optics V), 194-209
CODEN: PSISDG; ISSN: 0277-786X
PB SPIE-The International Society for Optical Engineering
DT Journal
LA English
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 27, 41, 57
AB Coumarin mols. are widely used as laser dyes and their luminescence properties show a large potential for their use as light emitters in org. light emitting devices. These mols. however are lacking of photo, chem. and thermal stability. At the outset, the fact that when the coumarin or other org. active mols. are covalently bonded to a metal oxide host, the stability properties can be improved. The authors outline the synthesis of several different coumarin-3-carboxylic acids by using a 1-pot synthesis from dipotassium o-methoxybenzylidenemalonates. The authors also outline a preparative route for the synthesis of corresponding coumarin-3-carboxylic amides with a side chain contg. terminal trimethyoxysilane functionality, which allows the creation of a covalent bond between the mol. and a Si oxide host matrix. These silylated coumarins are then covalently bonded through a sol-gel method to a developing **siloxane** host matrix. The Si matrix materials were synthesized through hydrolysis and simultaneous condensation of metalalkoxides such as phenylmethyltrimethoxysilane. Coumarin dyes are bonded in- situ to the developing matrix during the prepn. of the matrix. The excitation and emission spectra of these mols. are examd. in liq. phase to evaluate the effect of varying substitution pattern on luminescence characteristics. The photo luminescence characteristics are also measured from a solid thin film to explore the effect of the matrix on emission wavelengths. These materials show potentiality for their applications in thin film electro luminescence devices whose fabrication and properties are finally discussed.
ST coumarin dye deriv covalent bond **siloxane** sol gel LED; LUMO coumarin dye deriv **hybrid siloxane** sol gel LED; HOMO coumarin dye deriv **hybrid siloxane** sol gel LED; structure luminescence coumarin dye deriv **hybrid siloxane** sol gel; substituent coumarin dye deriv **hybrid siloxane** sol gel luminescence; mass spectra coumarin dye deriv **hybrid siloxane** sol gel; NMR coumarin dye deriv **hybrid siloxane** sol gel; melting point coumarin dye deriv **hybrid siloxane** sol gel; amide coumarin dye deriv **hybrid siloxane** sol gel LED; carboxylic acid coumarin dye deriv **siloxane** sol gel LED
IT Carboxylic acids, properties
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(coumarin-3-; covalent bonding of coumarin mols. to sol-gel matrixes for org. light-emitting device applications)
IT Amides, properties
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(coumarin-3-carboxylic; covalent bonding of coumarin mols. to sol-gel

matrixes for org. light-emitting device applications)

IT Bond formation
Differential scanning calorimetry
Electroluminescent devices
HOMO (molecular orbital)
LUMO (molecular orbital)
Luminescence
Mass spectra
Melting point
NMR (nuclear magnetic resonance)
Sol-gel processing
Substituent effects
(covalent bonding of coumarin mols. to sol-gel matrixes for org. light-emitting device applications)

IT **Siloxanes** (nonpolymeric)
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(covalent bonding of coumarin mols. to sol-gel matrixes for org. light-emitting device applications)

IT Dyes
(laser, coumarin; covalent bonding of coumarin mols. to sol-gel matrixes for org. light-emitting device applications)

IT Molecular structure-property relationship
(luminescence; covalent bonding of coumarin mols. to sol-gel matrixes for org. light-emitting device applications)

IT 64-19-7, Acetic acid, uses 110-89-4, Piperidine, uses
RL: CAT (Catalyst use); USES (Uses)
(covalent bonding of coumarin mols. to sol-gel matrixes for org. light-emitting device applications)

IT 2996-92-1
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(covalent bonding of coumarin mols. to sol-gel matrixes for org. light-emitting device applications)

IT 531-81-7, Coumarin-3-carboxylic acid 2085-33-8, Hydroxyquinoline aluminum
RL: PRP (Properties)
(covalent bonding of coumarin mols. to sol-gel matrixes for org. light-emitting device applications)

IT 613-45-6P, 2,4-Dimethoxybenzaldehyde 4460-86-0P, 2,4,5-Trimethoxybenzaldehyde 7324-86-9P, Diethyl-2,4-dimethoxybenzylidenemalonate 57724-31-9P, Diethyl-2,4,5-trimethoxybenzylidenemalonate 84562-48-1P, 4-Dimethylamino-2-methoxybenzaldehyde 86726-44-5P 133031-78-4P, Dipotassium-2,4-dimethoxybenzylidenemalonate 133031-81-9P, Dipotassium-2,4,5-trimethoxybenzylidenemalonate 297736-06-2P 297736-07-3P 297736-08-4P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(covalent bonding of coumarin mols. to sol-gel matrixes for org. light-emitting device applications)

IT 20300-59-8P, 7-Methoxycoumarin-3-carboxylic acid 55804-65-4P, Coumarin 343 81017-27-8P 86100-68-7P, 6,7-Dimethoxycoumarin-3-carboxylic acid 122607-15-2P 297736-09-5P 297736-10-8P 297736-11-9P 297736-12-0P 297736-13-1P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(covalent bonding of coumarin mols. to sol-gel matrixes for org. light-emitting device applications)

IT **67-63-0**, 2-Propanol, reactions 76-05-1, Trifluoroacetic acid, reactions 105-53-3, Diethyl malonate 407-25-0, Trifluoroacetic anhydride 530-62-1, 1,1'-Carbonyldiimidazole 830-79-5,

2,4,6-Trimethoxybenzaldehyde 1310-58-3, Potassium hydroxide, reactions
13822-56-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(covalent bonding of coumarin mols. to sol-gel matrixes for org. light-emitting device applications)

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD


RE
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RN 86726-44-5P
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RN 133031-81-9P
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RN 297736-09-5P
RN 297736-10-8P
RN 297736-11-9P
RN 297736-12-0P
RN 297736-13-1P
RN **67-63-0**
RN 76-05-1
RN 105-53-3
RN 407-25-0
RN 530-62-1
RN 830-79-5
RN 1310-58-3
RN 13822-56-5

L13 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 2002:307198 CAPLUS
DN 137:116871
TI **Siloxane**-based **hybrid** glass materials for binary and gray-scale mask photoimaging
AU Karkkainen, Ari H. O.; Rantala, Juha T.; Maaninen, Arto; Jabbour, Ghassan E.; Descour, Michael R.
CS VTT Electronics, Oulu, FIN-90570, Finland
SO Advanced Materials (Weinheim, Germany) (2002), 14(7), 535-540
CODEN: ADVMEW; ISSN: 0935-9648
PB Wiley-VCH Verlag GmbH
DT Journal
LA English
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 73
AB The fabrication of microoptical and optomech. structures by applying photoimaging of **hybrid** glass materials is discussed. The optical and optomech. structures are fabricated simultaneously in a single lithog. step. Gray-scale and binary photomasks have been successfully applied for the fabrication of lens arrays to a max. lens sag of 102 .mu.m and of optomech. structures to a max. height of 140 .mu.m. Alignment-aiding optomech. structures can be patterned simultaneously with optical structures in the **hybrid** glass to fabricate microoptical elements. No chem. or dry etch transfer of the imaged structures is required. The fabricated lenslets and the optomech. structures show high surface and optical quality. The fabricated **hybrid** glass surfaces can be coated with interference coatings utilizing std. deposition procedures. Photoimaging of **hybrid** glass materials simplifies the fabrication of the optical components and enables new optics integration options.
ST **hybrid** glass **siloxane** based photoimaging microoptical optomech structure; photolithog **hybrid** glass **siloxane** based microoptical optomech structure fabrication
IT Photoimaging materials
Photolithography
Surface roughness
(photoimaging of **siloxane**-based neg-tone **hybrid** glass materials in fabrication of microoptical and optomech. structures)
IT **Polysiloxanes**, processes
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)
(photoimaging of **siloxane**-based neg-tone **hybrid** glass materials in fabrication of microoptical and optomech. structures)
IT Ceramers
**Hybrid** organic-inorganic materials
(photoimaging of **siloxane**-based neg-tone **hybrid** glass materials in fabrication of microoptical and optomech. structures in relation to)
IT Polymerization
(photopolymn.; photoimaging of **siloxane**-based neg-tone **hybrid** glass materials in fabrication of microoptical and optomech. structures)
IT Microlenses
(refractive; photoimaging of **siloxane**-based neg-tone **hybrid** glass materials in fabrication of microoptical and optomech. structures)
IT 442874-00-2P, Phenyltrimethoxysilane-[3-(Methacryloyloxy)propyl]trimethoxysilane-trimethylolpropane trimethacrylate copolymer
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)

(crosslinked; photoimaging of **siloxane**-based neg-tone **hybrid** glass materials in fabrication of microoptical and optomech. structures)

IT **67-63-0**, Isopropanol, uses 108-10-1, Methyl isobutyl ketone
RL: NUU (Other use, unclassified); USES (Uses)
(developer mixt.; photoimaging of **siloxane**-based neg-tone **hybrid** glass materials in fabrication of microoptical and optomech. structures)

IT 947-19-3, 1-Hydroxycyclohexylphenyl ketone 162881-26-7
RL: CAT (Catalyst use); USES (Uses)
(photopolymn. initiator system; photoimaging of **siloxane** -based neg-tone **hybrid** glass materials in fabrication of microoptical and optomech. structures)

IT 94-36-0, Benzoyl peroxide, uses
RL: CAT (Catalyst use); USES (Uses)
(prepolymer soln.; photoimaging of **siloxane**-based neg-tone **hybrid** glass materials in fabrication of microoptical and optomech. structures)

IT 2530-85-0, 3-[Methacryloyloxy)propyl]trimethoxysilane 2996-92-1, Phenyltrimethoxysilane 3290-92-4, Trimethylolpropane trimethacrylate
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(prepolymer soln.; photoimaging of **siloxane**-based neg-tone **hybrid** glass materials in fabrication of microoptical and optomech. structures)

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RN 442874-00-2P

RN **67-63-0**

RN 108-10-1

RN 947-19-3

RN 162881-26-7

RN 94-36-0

RN 2530-85-0
RN 2996-92-1
RN 3290-92-4

L13 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 2002:483594 CAPLUS
DN 137:144003
TI Preparation of inorganic-organic **hybrid** films containing particles using electrophoretic deposition method
AU Yamada, Noriko; Shoji, Hiromasa; Kubo, Yuji; Katayama, Shingo
CS Advanced Technology Research Laboratories, Nippon Steel Corporation, Futtsu, Chiba, 293-8511, Japan
SO Journal of Materials Science (2002), 37(10), 2071-2076
CODEN: JMTSAS; ISSN: 0022-2461
PB Kluwer Academic Publishers
DT Journal
LA English
CC 57-1 (Ceramics)
Section cross-reference(s): 55
AB The composite films of **methylsiloxane** inorg.-org. **hybrid** and MoS2 particles have successfully been fabricated by electrophoretic deposition of MoS2 particles in a mixed soln. of Me Et ketone (MEK) and inorg.-org. **hybrid** sol. The addn. of 20 vol% **hybrid** sol into a MEK suspension increased the amt. of MoS2 deposition twice as much as that of MoS2 deposition in MEK alone. The fraction of particles deposited on a substrate in MEK-20 vol% sol was estd. to be much larger than that in MEK. The hydrolyzed methyltriethoxysilane in a **hybrid** sol modified the MoS2 particles, resulting in lower neg. zeta potential, which reduces the repulsion force among particles and makes the incorporation of particles into a deposition film easier. The surface modification also enables the incorporation of particles into a deposit by the interaction of surface modifiers. These factors enhance the incorporation of MoS2 particles in electrophoretic deposition in MEK-sol.
ST inorg org **hybrid** molybdenum sulfide composite film electrophoretic deposition; silica gel molybdenum sulfide composite film electrophoretic deposition
IT Electrophoretic deposition
Zeta potential
(electrophoretic deposition of organically modified silica-MoS2 particle composite films)
IT Silica gel, preparation
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(organically modified, composite films; electrophoretic deposition of organically modified silica-MoS2 particle composite films)
IT Ceramers
**Hybrid** organic-inorganic materials
(silica-molybdenum sulfide composite films; electrophoretic deposition of organically modified silica-MoS2 particle composite films)
IT 1317-33-5, Molybdenum sulfide (MoS2), processes
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); PROC (Process)
(composite films; electrophoretic deposition of organically modified silica-MoS2 particle composite films)
IT 60676-86-0P, Vitreous silica
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(gel-glass, organically modified, composite films; electrophoretic deposition of organically modified silica-MoS2 particle composite

films)
IT   2031-67-6, Silane, triethoxymethyl-
     RL: CPS (Chemical process); PEP (Physical, engineering or chemical
     process); PROC (Process)
        (precursor; electrophoretic deposition of organically modified
        silica-MoS2 particle composite films)
IT   64-17-5, Ethanol, uses **67-63-0**, 2-Propanol, uses   67-64-1,
     Acetone, uses   78-93-3, Methyl ethyl ketone, uses   108-10-1, Methyl
     isobutyl ketone   110-80-5, 2-Ethoxyethanol   123-54-6, Acetylacetone,
     uses   141-97-9, Ethyl acetoacetate
     RL: MOA (Modifier or additive use); USES (Uses)
        (solvent; electrophoretic deposition of organically modified
        silica-MoS2 particle composite films)
IT   11109-50-5, Sus 304
     RL: NUU (Other use, unclassified); USES (Uses)
        (substrates; electrophoretic deposition of organically modified
        silica-MoS2 particle composite films)
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RN   1317-33-5
RN   60676-86-0P
RN   2031-67-6
RN   64-17-5
RN   **67-63-0**
RN   67-64-1
RN   78-93-3
RN   108-10-1
RN   110-80-5
RN   123-54-6
RN   141-97-9
RN   11109-50-5

L13  ANSWER 4 OF 15  CAPLUS  COPYRIGHT 2003 ACS
AN   1998:204034  CAPLUS
DN   129:33730
TI   Electrochemical impedance studies of **hybrids** of
     perfluorosulfonic acid ionomer and silicon oxide by sol-gel reaction from
     solution
AU   Zoppi, R. A.; Nunes, S. P.
CS   Instituto de Quimica, Universidade Estadual de Campinas, CEP 13083-970,
     Campinas, Brazil
SO   Journal of Electroanalytical Chemistry (1998), 445(1-2), 39-45

CODEN: JECHES; ISSN: 0368-1874
PB Elsevier Science S.A.
DT Journal
LA English
CC 72-3 (Electrochemistry)
Section cross-reference(s): 37, 76

AB **Hybrids** of Nafion and silica were prepd. from soln., growing the inorg. phase by hydrolysis/condensation of alkoxy silanes. Using tetraethoxysilane (TEOS) as the inorg. precursor, transparent and rigid films were obtained. Substituting part of the TEOS (20 wt· substitution by 1,1,3,3- tetramethyl-1,3-**diethoxydisiloxane** (TMDES) more flexible films were obtained. These films were translucent and showed a phase segregation which was clearly obsd. by transmission electron microscopy. The ionic cond. of the **hybrids** was measured by electrochem. impedance spectroscopy using two stainless steel electrodes, a frequency range of 0.1 to 105 Hz, and temps. from 25 to 100.degree.C. Samples were also characterized by modulated differential scanning calorimetry.

ST **hybrid** material composite ionic conductor Nafion; silica nafion **hybrid** hydrolysis condensation alkoxysilanes

IT Spectroscopy
(energy-dispersive; of matrix and domain in Nafion/TEOS/TMDS **hybrids**)

IT Polyoxyalkylenes, properties
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(fluorine- and sulfo-contg., ionomers; **hybrids** with silicon oxide by sol-gel reaction from soln.)

IT Polyoxyalkylenes, properties
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(fluorine-contg., sulfo-contg., ionomers; **hybrids** with silicon oxide by sol-gel reaction from soln.)

IT Ionic conductivity
(for Nafion/TEOS/TMDES systems)

IT Activation energy
(for distribution of free vol. in Nafion/TEOS/TMDES **hybrids**)

IT Differential scanning calorimetry
(for pure Nafion)

IT Ionomers
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(**hybrids** with silicon oxide by sol-gel reaction from soln.)

IT Phase separation
(in films of **hybrids** of Nafion/TEOS/TMDES by TEM)

IT Condensation reaction
Hydrolysis
(of alkoxysilanes in formation of **hybrids** of Nafion/TEOS/TMDES)

IT Electric impedance
(of **hybrids** films of silica with perfluorosulfonic acid ionomer)

IT Films
(of **hybrids** of Nafion/TEOS/TMDES; formation and properties)

IT Surface structure
(of pure Nafion films and Nafion/TEOS/TMDES **hybrids** by TEM)

IT Fluoropolymers, properties
Fluoropolymers, properties
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(polyoxyalkylene-, sulfo-contg., ionomers; **hybrids** with silicon oxide by sol-gel reaction from soln.)

IT Ionomers
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(polyoxyalkylenes, fluorine- and sulfo-contg.; **hybrids** with silicon oxide by sol-gel reaction from soln.)
IT Phase transition
(reversible, exothermic: related to cluster reorganization)
IT 7631-86-9, Silica, properties
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(**hybrids** with perfluorosulfonic acid ionomer by sol-gel reaction from soln.)
IT 7732-18-5, Water, uses
RL: NUU (Other use, unclassified); PRP (Properties); USES (Uses)
(in fabrication of **hybrids** of silica with perfluorosulfonic acid ionomer by sol-gel reaction from soln.)
IT **67-63-0**, Iso-propanol, properties 71-23-8, n-Propanol, properties 7647-01-0, Hydrochloric acid, properties
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(in fabrication of **hybrids** of silica with perfluorosulfonic acid ionomer by sol-gel reaction from soln.)
IT 18420-09-2, 1,1,3,3-Tetramethyl-1,3-**diethoxydisiloxane**
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(precursor for SiO2 obtaining in formation of **hybrids** of Nafion and silica)
IT 78-10-4, Tetraethoxysilane
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(precursor for SiO2 obtaining in formation of **hybrids** of Nafion and silica)
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RN 7631-86-9
RN 7732-18-5
RN **67-63-0**
RN 71-23-8
RN 7647-01-0
RN 18420-09-2
RN 78-10-4

L13 ANSWER 5 OF 15 CAPLUS 
AN 1989:81194 CAPLUS
DN 110:81194
TI Solvent extraction of inorganic/organic **hybrid** gels prepared by the sol-gel method
AU Kojiya, Shinzo; Ochiai, Kenichiro; Yamashita, Shinzo
CS Dep. Chem., Kyoto Inst. Technol., Kyoto, 606, Japan
SO Chemistry Express (1988), 3(10), 631-4
CODEN: CHEXEU; ISSN: 0911-9566
DT Journal
LA Japanese
CC 57-9 (Ceramics)
AB Solvent extns. were carried out on inorg./org. **hybrid** gels prepd. by the sol-gel method. Incorporation of hydroxy-terminated poly(**dimethylsiloxane**) into glass matrix was nonquant. About 20% of the original polymer remained unreacted and could be extd. TG anal. of the gels indicated that the incorporated polymer has better thermal stability than the free polymer.
ST inorg org **hybrid** sol gel; solvent extn inorg org gel **hybrid**
IT Gels
(**hybrid**, inorg.-org., solvent extn. from)
IT Polymers, uses and miscellaneous
RL: USES (Uses)
(inorg. gel **hybrid** with, solvent extn. from)
IT **67-63-0**, 2-Propanol, uses and miscellaneous 75-09-2, Dichloromethane, uses and miscellaneous 108-88-3, Toluene, uses and miscellaneous 109-99-9, THF, uses and miscellaneous 110-82-7, Cyclohexane, uses and miscellaneous 123-91-1, Dioxane, uses and miscellaneous
RL: USES (Uses)
(extn. of, from inorg.-org. **hybrid** gels)
RN **67-63-0**
RN 75-09-2
RN 108-88-3
RN 109-99-9
RN 110-82-7
RN 123-91-1

L13 ANSWER 6 OF 15 CAPLUS 
AN 2001:737029 CAPLUS
DN 135:305276
TI Primer for use under a photocatalytic coating layer and coated articles using the primer
IN Nakanishi, Makoto; Kojima, Eiichi; Kanamori, Taro; Hashiguchi, Yuichi
PA Toto Ltd., Japan; JSR Ltd.
SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C09D201-00
ICS B01J035-02; B01J037-02; B32B009-00; C09D005-00; C09D143-00; C09D183-04

CC   42-10 (Coatings, Inks, and Related Products)
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | JP 2001279184 | A2 | 20011010 | JP 2000-97952 | 20000331 |
| PRAI | JP 2000-97952 | | 20000331 | | |

AB   The primer can prevent the erosion of coated articles such as exterior plastics due to the photolytic attack, and contains **hybrid** org.-inorg. materials and solvents which have SP value difference with that of the substrate of 0.2-1.6. Thus, mixing PMMA 36 with a **polysiloxane** 24, i-PrOH (SP value 11.50) 285, BuOAc (SP value 8.50) 285, MEK (SP value 9.30) 285 and EtOAc (SP value 9.10) 285 parts gave a primer which was coated on the cleaned surface of a Sumipex Clear 000 (PMMA; SP value 9.10) panel to a wet pickup wt. of 20-25 g/m2, dried at 80.degree. for 30 min with hot air, cooled to room temp., over-coated with a photocatalytic coating contg. ST-K 01 and ST-K 03 and dried to give a panel with lasting wettability and coat film adhesion.

ST   photocatalytic coating protection primer **hybrid** org inorg material

IT   Photolysis catalysts
(coatings; primer for use under a photolytic coating layer and coated articles)

IT   **Polysiloxanes**, uses
RL: POF (Polymer in formulation); RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
(**hybrid** org.-inorg. materials for primer; primer for use under a photolytic coating layer and coated articles)

IT   Solvents
(org.; primer for use under a photolytic coating layer and coated articles)

IT   **Hybrid** organic-inorganic materials
Primers (paints)
Solvent effect
(primer for use under a photolytic coating layer and coated articles)

IT   9011-14-7, PMMA
RL: POF (Polymer in formulation); RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
(**hybrid** org.-inorg. materials for primer; primer for use under a photolytic coating layer and coated articles)

IT   202936-29-6, ST-K 03   220946-52-1, ST-K 01
RL: TEM (Technical or engineered material use); USES (Uses)
(photocatalytic coatings; primer for use under a photolytic coating layer and coated articles)

IT   **67-63-0**, Isopropanol, uses   78-93-3, MEK, uses   123-86-4, Butyl acetate   141-78-6, Ethyl acetate, uses
RL: NUU (Other use, unclassified); USES (Uses)
(solvents of specified soly. parameter; primer for use under a photolytic coating layer and coated articles)

RN   9011-14-7
RN   202936-29-6
RN   220946-52-1
RN   **67-63-0**
RN   78-93-3
RN   123-86-4
RN   141-78-6

L13  ANSWER 7 OF 15  CAPLUS  
AN   1999:390437  CAPLUS
DN   131:40530
TI   Method for identifying nucleic acids by means of matrix-assisted laser desorption/ionisation mass spectrometry using charge tag-labeled **hybridization** probes

IN Gut, Ivo Glynne; Berlin, Kurt; Lehrach, Hans
PA Max-Planck-Gesellschaft zur Forderung der Wissenschaften e.V., Germany
SO PCT Int. Appl., 51 pp.
CODEN: PIXXD2
DT Patent
LA German
IC ICM C12Q001-68
CC 3-1 (Biochemical Genetics)
Section cross-reference(s): 7, 9
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 9929898 | A2 | 19990617 | WO 1998-EP7911 | 19981204 |
| | WO 9929898 | A3 | 19991028 | | |
| | W: CA, JP, US | | | | |
| | RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| | CA 2312052 | AA | 19990617 | CA 1998-2312052 | 19981204 |
| | EP 1036202 | A2 | 20000920 | EP 1998-966608 | 19981204 |
| | EP 1036202 | B1 | 20020502 | | |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE, PT, IE, FI | | | | |
| | JP 2001526381 | T2 | 20011218 | JP 2000-524469 | 19981204 |
| | AT 217028 | E | 20020515 | AT 1998-966608 | 19981204 |
| | ES 2173670 | T3 | 20021016 | ES 1998-966608 | 19981204 |
| PRAI | EP 1997-121471 | A | 19971205 | | |
| | WO 1998-EP7911 | W | 19981204 | | |

AB A method for detecting a nucleotide sequence in a nucleic acid mol. by means of **hybridization** against an ordered array of charged tag-labeled probes using MALDI mass spectrometry is described. One advantage of the method is that it provides for simultaneous characterization of a no. of unknown nucleic acid mols. using this array of probes. In particular peptide analogs of nucleic acids, esp. peptide nucleic acids, that showed improved efficiency of desorption are used as probes. The invention also relates to a kit contg. the probes and/or a sample carrier, optionally with nucleic acids bonded thereto.
ST MALDI immobilized probe DNA sequencing
IT Proteins, specific or class
RL: DEV (Device component use); MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(gene 32, in immobilization of **hybridization** of probes on MALDI matrixes; method for identifying nucleic acids by means of matrix-assisted laser desorption/ionisation mass spectrometry using charge tag-labeled **hybridization** probes)
IT Peptide nucleic acids
Phosphorothioate oligonucleotides
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(immobilized, as desorbable probes; method for identifying nucleic acids by means of matrix-assisted laser desorption/ionisation mass spectrometry using charge tag-labeled **hybridization** probes)
IT Amines, reactions
Antibodies
Epoxides
**Polysiloxanes**, reactions
Silanes
Thiols (organic), reactions
RL: DEV (Device component use); MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(in immobilization of **hybridization** of probes on MALDI matrixes; method for identifying nucleic acids by means of matrix-assisted laser desorption/ionisation mass spectrometry using charge tag-labeled **hybridization** probes)
IT DNA sequence analysis

(mass spectrometric; method for identifying nucleic acids by means of matrix-assisted laser desorption/ionisation mass spectrometry using charge tag-labeled **hybridization** probes)

IT Nucleic acid **hybridization**
(method for identifying nucleic acids by means of matrix-assisted laser desorption/ionisation mass spectrometry using charge tag-labeled **hybridization** probes)

IT Combinatorial library
(of charge tag labeled probes; method for identifying nucleic acids by means of matrix-assisted laser desorption/ionisation mass spectrometry using charge tag-labeled **hybridization** probes)

IT Immobilization, biochemical
(of probes on matrixes for MALDI; method for identifying nucleic acids by means of matrix-assisted laser desorption/ionisation mass spectrometry using charge tag-labeled **hybridization** probes)

IT Probes (nucleic acid)
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(ordered arrays, charge labeled; method for identifying nucleic acids by means of matrix-assisted laser desorption/ionisation mass spectrometry using charge tag-labeled **hybridization** probes)

IT Laser ionization mass spectrometry
(photodesorption, matrix-assisted; method for identifying nucleic acids by means of matrix-assisted laser desorption/ionisation mass spectrometry using charge tag-labeled **hybridization** probes)

IT Laser desorption mass spectrometry
(photoionization, matrix-assisted; method for identifying nucleic acids by means of matrix-assisted laser desorption/ionisation mass spectrometry using charge tag-labeled **hybridization** probes)

IT 1519-55-7, .alpha.-Cyano-4-methoxycinnamic acid 227080-33-3 227080-34-4
RL: DEV (Device component use); USES (Uses)
(as matrix for MALDI; method for identifying nucleic acids by means of matrix-assisted laser desorption/ionisation mass spectrometry using charge tag-labeled **hybridization** probes)

IT 64-17-5, Ethanol, uses 67-56-1, Methanol, uses **67-63-0**, 2-Propanol, uses 67-64-1, 2-Propanone, uses 75-05-8, Acetonitrile, uses 7732-18-5, Water, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(as solvent; method for identifying nucleic acids by means of matrix-assisted laser desorption/ionisation mass spectrometry using charge tag-labeled **hybridization** probes)

IT 58-85-5, Biotin 9013-20-1, Streptavidin
RL: DEV (Device component use); MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(in immobilization of **hybridization** of probes on MALDI matrixes; method for identifying nucleic acids by means of matrix-assisted laser desorption/ionisation mass spectrometry using charge tag-labeled **hybridization** probes)

RN 1519-55-7
RN 227080-33-3
RN 227080-34-4
RN 64-17-5
RN 67-56-1
RN **67-63-0**
RN 67-64-1
RN 75-05-8
RN 7732-18-5
RN 58-85-5
RN 9013-20-1

L13 ANSWER 8 OF 15 CAPLUS 
AN 2001:936967 CAPLUS

DN 136:309566
TI A hydrophobic gel for epoxidation of olefins with organic peroxides
AU Karli, Alfonsus; Larsen, Gustavo
CS Department of Chemical Engineering, University of Nebraska, Lincoln, NE, 68588-0126, USA
SO Catalysis Letters (2001), 77(1-3), 107-111
CODEN: CALEER; ISSN: 1011-372X
PB Kluwer Academic/Plenum Publishers
DT Journal
LA English
CC 22-7 (Physical Organic Chemistry)
Section cross-reference(s): 21, 67
AB The epoxidn. of cyclooctene by tert-Bu hydroperoxide (t-BuOOH) over a TiO2-SiO2 xerogel made from a permethylated **cyclooligosiloxane,** tetraethylorthosilicate, and a Ti chloroalkoxide, was carried out in acetonitrile as the reaction solvent. The org. moieties of the **hybrid** gel (in this case, -Me groups) and the Ti content of the catalyst appear to be stable on prolonged exposure to the reaction medium. Besides very good stability, the **hybrid** catalyst in this study displays 100% selectivity toward cyclooctene epoxide prodn. Solid state 29Si magic angle spinning NMR (29Si MASNMR), diffuse reflectance FTIR spectroscopy (DRIFTS), and chem. anal. were used to monitor the stability of the **hybrid** material. The kinetics of olefin epoxidn. was studied in a batch reactor in the 313-343 K range.
ST hydrophobic epoxidn olefin org peroxide
IT MAS NMR spectroscopy
(CP, hydrophobic gel 29Si; hydrophobic gel for epoxidn. of olefins with org. peroxides)
IT Diffuse reflectance IR spectroscopy
(Fourier-transform, hydrophobic gel; hydrophobic gel for epoxidn. of olefins with org. peroxides)
IT **Polysiloxanes,** reactions
RL: CAT (Catalyst use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(gel precursor; hydrophobic gel for epoxidn. of olefins with org. peroxides)
IT Activation energy
Epoxidation
Epoxidation catalysts
Epoxidation kinetics
Transition state structure
Xerogels
(hydrophobic gel for epoxidn. of olefins with org. peroxides)
IT Alkenes, reactions
Hydroperoxides
RL: RCT (Reactant); RACT (Reactant or reagent)
(hydrophobic gel for epoxidn. of olefins with org. peroxides)
IT MAS NMR spectroscopy
(hydrophobic gel 29Si; hydrophobic gel for epoxidn. of olefins with org. peroxides)
IT IR spectra
(hydrophobic gel; hydrophobic gel for epoxidn. of olefins with org. peroxides)
IT Gels
(hydrophobic; hydrophobic gel for epoxidn. of olefins with org. peroxides)
IT Peroxides, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(org.; hydrophobic gel for epoxidn. of olefins with org. peroxides)
IT Adsorption
(oxidant on gel; hydrophobic gel for epoxidn. of olefins with org. peroxides)

IT   Methyl group
        (surface tied to **hybrid** hydrophobic; hydrophobic gel for
        epoxidn. of olefins with org. peroxides)
IT   75-05-8, Acetonitrile, uses
     RL: NUU (Other use, unclassified); USES (Uses)
        (better solvent than alcs.; hydrophobic gel for epoxidn. of olefins
        with org. peroxides)
IT   **67-63-0**, Isopropanol, reactions   7550-45-0, Titanium
     tetrachloride, reactions
     RL: CAT (Catalyst use); RCT (Reactant); RACT (Reactant or reagent); USES
     (Uses)
        (conversion to hydrophobic gel precursor; hydrophobic gel for epoxidn.
        of olefins with org. peroxides)
IT   7722-84-1, Hydrogen peroxide, reactions
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (generation of oxygen in side reaction; hydrophobic gel for epoxidn. of
        olefins with org. peroxides)
IT   75-91-2, tert-Butyl hydroperoxide   931-87-3, cis-Cyclooctene
     RL: CPS (Chemical process); PEP (Physical, engineering or chemical
     process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant
     or reagent)
        (hydrophobic gel for epoxidn. of olefins with org. peroxides)
IT   286-62-4, Cyclooctene epoxide
     RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)
        (hydrophobic gel for epoxidn. of olefins with org. peroxides)
IT   78-10-4, TEOS   541-05-9
     RL: CAT (Catalyst use); RCT (Reactant); RACT (Reactant or reagent); USES
     (Uses)
        (hydrophobic gel precursor; hydrophobic gel for epoxidn. of olefins
        with org. peroxides)
IT   67-56-1, Methanol, uses   75-65-0, tert-Butanol, uses
     RL: NUU (Other use, unclassified); USES (Uses)
        (oxidn. of solvent; hydrophobic gel for epoxidn. of olefins with org.
        peroxides)
RE.CNT  21    THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD
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(20) Vanoppen, D; Angew Chem 1995, V34, P560 CAPLUS
(21) Vu, D; Thesis University of Nebraska-Lincoln 1999

RN   75-05-8
RN   **67-63-0**
RN   7550-45-0
RN   7722-84-1
RN   75-91-2

RN 931-87-3
RN 286-62-4
RN 78-10-4
RN 541-05-9
RN 67-56-1
RN 75-65-0

L13 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 2000:517764 CAPLUS
DN 133:274951
TI Combinatorial methods in sol-gel technology
AU Rantala, Juha T.; Kololuoma, Terho; Kivimaki, L.
CS VTT Electronics/Infotech Oulu, Oulu, Finland
SO Proceedings of SPIE-The International Society for Optical Engineering (2000), 3941(Combinatorial and Composition Spread Techniques in Materials and Device Development), 11-18
CODEN: PSISDG; ISSN: 0277-786X
PB SPIE-The International Society for Optical Engineering
DT Journal
LA English
CC 76-5 (Electric Phenomena)
Section cross-reference(s): 56
AB Sol-gel processing consists several variable parameters during materials synthesis and post processing steps. The sol-gel synthesis is rather sensitive for the parameters such as pH, temp., type of catalyst, reaction time etc. However, this sensitivity can be taken as an advantage when developing and studying new materials and their properties. Furthermore, since the sol-gel technol. mainly describes the fabrication of solid state materials from a liq. phase by applying metal alkoxides or metal salts as precursors, the post processing such as sintering has crit. effects on the final form and properties of the solid material. Combinatorial chem. and methods are valuable tools to est. the effects of different variables and to build-up combinatorial libraries for the sol-gel technique. This paper generally describes potentials and the usage motivation of combinatorial chem. in the sol-gel technol. by taking into account some major steps in the synthesis and processing which are valuable for the estn. of the final product properties. Different kind of post processing steps in the combinatorial manner are studied in details. As an example the post processing of sol-gel derived semiconductor oxides and photosensitivity of **hybrid** sol-gel glasses are presented. The combinatorial treatment and measurement methods for these materials are explained.
ST photocond antimony doped sol gel tin oxide glass; metal alkoxide salt sintering semiconductor oxide
IT Semiconductor films
(Sb doped SnO2; photocond. of)
IT Dopants
(Sb; effects on photocond. of Sb doped sol-gel SnO2)
IT Detergents
(Triton X100; in sol-gel processing of SnO2)
IT Refractive index
(and photocond. of Sb doped sol-gel SnO2)
IT Coating process
(dip; in sol-gel processing of SnO2)
IT Thickness
(films; effects on photocond. of Sb doped sol-gel SnO2)
IT Combinatorial chemistry
Hydrolysis
Photolithography
Sintering
(in sol-gel processing of SnO2)
IT Alkali metal salts
Metal alkoxides

RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(in sol-gel processing of SnO2)

IT Glass substrates
(lime; in photocond. of Sb doped sol-gel SnO2)

IT Composites
(mol.; photocond. of Sb doped sol-gel SnO2)

IT Photoconductivity
Sol-gel processing
(of Sb doped sol-gel SnO2)

IT Crosslinking
(photochem.; in sol-gel processing of SnO2)

IT Electric conductivity
(photocond. of Sb doped sol-gel SnO2)

IT Zirconates
Zirconates
RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(**siloxane**-, organically modified; photocond. of Sb doped sol-gel SnO2)

IT Coating process
(spin; in sol-gel processing of SnO2)

IT Coating process
(spray; in sol-gel processing of SnO2)

IT Borosilicate glasses
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(substrate; in photocond. of Sb doped sol-gel SnO2)

IT **Polysiloxanes**, properties
**Polysiloxanes**, properties
RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(zirconate-, organically modified; photocond. of Sb doped sol-gel SnO2)

IT 7732-18-5, Water, processes
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(deionized; in sol-gel processing of SnO2)

IT 9002-93-1, Triton X100
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(detergent; in sol-gel processing of SnO2)

IT 10025-91-9, Antimony chloride (SbCl3)
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(dopant source; in sol-gel processing of SnO2)

IT 7440-36-0, Antimony, uses
RL: MOA (Modifier or additive use); USES (Uses)
(dopant; effects on photocond. of Sb doped sol-gel SnO2)

IT **67-63-0**, Isopropanol, processes 67-64-1, Acetone, processes
79-41-4, Methacrylic acid, processes 2171-98-4, Zirconium isopropoxide
2530-85-0 24623-80-1, Tin chloride (SnCl4) tetrahydrate
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(in sol-gel processing of SnO2)

IT 162881-26-7, Irgacure 819
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(photo initiator; in sol-gel processing of SnO2)

IT 7440-37-1, Argon, processes
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(plasma treatment; effects on photocond. of Sb doped sol-gel SnO2)

IT 1332-29-2P, Tin oxide
RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(sol-gel; photocond. of)
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE


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(2) Kololuoma, T; SPIE Photonic West 1999, P134 CAPLUS
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(4) Sun, X; Advanced Materials 1997, V9(13), P1046 CAPLUS


RN 7732-18-5
RN 9002-93-1
RN 10025-91-9
RN 7440-36-0
RN **67-63-0**
RN 67-64-1
RN 79-41-4
RN 2171-98-4
RN 2530-85-0
RN 24623-80-1
RN 162881-26-7
RN 7440-37-1
RN 1332-29-2P




AN 1999:206999 CAPLUS
DN 130:268425

TI Rubber-ceramic composites and their manufacture

IN Hamanaka, Seiko; Nishimoto, Kazuo
PA Nichias Corp., Japan


SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C08J003-20
ICS C08K003-22; C08L021-00; C08L083-04; C08C019-26
CC 39-9 (Synthetic Elastomers and Natural Rubber)
Section cross-reference(s): 57
FAN.CNT 1


| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | JP 11080373 | A2 | 19990326 | JP 1997-242752 | 19970908 |
| | JP 3295023 | B2 | 20020624 | | |
| PRAI | JP 1997-242752 | | 19970908 | | |


AB Rubbers dissolved in org. solvents or liq. rubbers are mixed with organometallic compds. and then subjected to sol-gel reaction so that oxides of the metals derived from the organometallic compds. are formed and dispersed finely, polymn. occurs, and chem. bonds are formed between the organometallic compds. and rubbers. Thus, SBR rubber was dissolved in THF, mixed with 120.0 phr (.gamma.-isocyanatopropyl)triethoxysilane, gelled with H2O, ammonia, and NH4F, dried, further mixed with S 1.5, ZnO 5.0, and vulcanizing accelerators 3.0 phr, and press-vulcanized to give a sheet showing improved heat resistance compared to an SBR sheet contg. 19.0 phr white carbon.

ST SBR rubber ceramic composite manuf; isocyanatopropyltriethoxysilane rubber composite heat resistance
IT Cold-resistant materials
Heat-resistant materials
**Hybrid** organic-inorganic materials
Sol-gel processing
Transparent materials
(manuf. of rubber-ceramic composites by sol-gel process)

IT Oxides (inorganic), preparation
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(manuf. of rubber-ceramic composites by sol-gel process)
IT EPDM rubber
Silicone rubber, preparation
Styrene-butadiene rubber, preparation
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(reaction products, with organometallic compds.; manuf. of
rubber-ceramic composites by sol-gel process)
IT **Polysiloxanes**, preparation
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(reaction products, with rubber; manuf. of rubber-ceramic composites by
sol-gel process)
IT **67-63-0DP**, Isopropanol, polytitanate derivs., reaction products
with rubber 546-68-9DP, Titanium tetraisopropoxide, reaction products
with rubber 2269-22-9DP, reaction products with rubber 4420-74-0DP,
(.gamma.-Mercaptopropyl)trimethoxysilane, reaction products with rubber
9016-00-6DP, Dimethyl **siloxane**, sru, reaction products with
rubber 24801-88-5DP, reaction products with rubber 31900-57-9DP,
Dimethylsilanediol homopolymer, reaction products with rubber
40372-72-3DP, Bis(3-triethoxysilylpropyl)tetrasulfane, reaction products
with rubber
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(manuf. of rubber-ceramic composites by sol-gel process)
IT 9003-55-8P
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(styrene-butadiene rubber, reaction products, with organometallic
compds.; manuf. of rubber-ceramic composites by sol-gel process)
RN **67-63-0DP**
RN 546-68-9DP
RN 2269-22-9DP
RN 4420-74-0DP
RN 9016-00-6DP
RN 24801-88-5DP
RN 31900-57-9DP
RN 40372-72-3DP
RN 9003-55-8P

L13 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1999:502748 CAPLUS
DN 131:149863
TI Molecular sieving silica membrane fabrication process
IN Raman, Narayan K.; Brinker, Charles Jeffrey
PA Gas Research Institute, USA; Sandia National Laboratories
SO U.S., 18 pp.
CODEN: USXXAM
DT Patent
LA English
IC ICM B05D005-00
NCL 427244000
CC 66-4 (Surface Chemistry and Colloids)
Section cross-reference(s): 36, 78
FAN.CNT 2

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | US 5935646 | A | 19990810 | US 1998-13346 | 19980126 |
| | US 5770275 | A | 19980623 | US 1996-702745 | 19960823 |

PRAI US 1996-702745 19960823
AB A process for producing a mol. sieve silica membrane comprising depositing
a **hybrid** org.-inorg. polymer comprising at least one org.
constituent and at least one inorg. constituent on a porous substrate
material and removing at least a portion of the at least one org.

constituent of the **hybrid** org.-inorg. polymer, forming a porous
film.
ST silica membrane mol sieve org inorg polymer
IT Permeation
(permeance and pore size and structure properties of silica membranes prepd. by copolymn. of TEOS and MTES and deposited on a porous alumina substrate)
IT **Polysiloxanes**, properties
RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(permeance and pore size and structure properties of silica membranes prepd. by copolymn. of TEOS and MTES and deposited on a porous alumina substrate)
IT Molecular sieves
Pore size
Pore size distribution
Pore structure
Porosity
Porous materials
(permeance and pore size and structure properties of silica membranes prepd. by copolymn. of TEOS and MTES detd. by mol. sieving of various gas mols.)
IT Xerogels
(permeance and pore size and structure properties of silica membranes prepd. by copolymn. of TEOS and MTES xerogels)
IT **67-63-0**, Isopropanol, uses 75-65-0, tert-Butanol, uses
27129-87-9, 3,5-Dimethyl benzyl alcohol
RL: NUU (Other use, unclassified); USES (Uses)
(mol. probing of surface derivatized silica membranes of TEOS and MTES with)
IT 1344-28-1, Alumina, uses
RL: NUU (Other use, unclassified); USES (Uses)
(permeance and pore size and structure properties of silica membranes prepd. by copolymn. of TEOS and MTES and deposited on a porous alumina substrate)
IT 78-10-4, Tetraethoxysilane 2031-67-6, Methyltriethoxysilane
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(permeance and pore size and structure properties of silica membranes prepd. by copolymn. of TEOS and MTES and deposited on a porous alumina substrate)
IT 88029-70-3P
RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(permeance and pore size and structure properties of silica membranes prepd. by copolymn. of TEOS and MTES and deposited on a porous alumina substrate)
IT 74-82-8, Methane, properties 124-38-9, Carbon dioxide, properties
2551-62-4, Sulfur hexafluoride 7440-59-7, Helium, properties
7727-37-9, Nitrogen, properties
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(permeance and pore size and structure properties of silica membranes prepd. by copolymn. of TEOS and MTES detd. by mol. sieving of)
IT 2996-92-1, Phenyltrimethoxysilane
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(surface derivatization of silica membranes prepd. by copolymn. of TEOS and MTES detd. by addn. of during the polymn. process)
RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

(1) Alary; US 4562021 1985 CAPLUS
(2) Anderson; US 5096745 1992 CAPLUS
(3) Anderson; US 5169576 1992 CAPLUS
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V125, P1
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RN **67-63-0**
RN 75-65-0
RN 27129-87-9
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RN 78-10-4
RN 2031-67-6
RN 88029-70-3P
RN 74-82-8
RN 124-38-9
RN 2551-62-4
RN 7440-59-7
RN 7727-37-9
RN 2996-92-1

L13 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1998:66185 CAPLUS
DN 128:116668
TI Composite pervaporation membrane with ceramic support structure
PA Mauz, Matthias, Germany
SO Ger. Offen., 10 pp.
CODEN: GWXXBX
DT Patent
LA German
IC ICM B01D069-12
ICS B01D061-36; B01D001-00; B01D005-00; C07B063-00
CC 47-2 (Apparatus and Plant Equipment)
Section cross-reference(s): 38, 57, 80
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | DE 19629061 | A1 | 19980122 | DE 1996-19629061 | 19960719 |
| PRAI | DE 1996-19629061 | | 19960719 | | |

AB The composite membrane is a pore-free polymer cover layer on a porous ceramic support layer having pore size 0.005-0.5 .mu.m. The org. solvent-selective polymer cover layer can be a **polydimethylsiloxane**, polyamide, or polyether. The sides of the ceramic layer are sealed with an epoxy resin or polyurethane. The membrane has good thermal and chem. stability, and can be used for pervaporation of solvent mixts. in an anal. lab., e.g., HPLC solvents. It may be used for **hybrid** distn.-thermal sepn. methods.
ST pervaporation membrane ceramic support analytical solvent
IT Ceramic membranes
Solvents
(composite pervaporation membrane with ceramic support structure)
IT Polyamides, uses
Polyethers, uses

RL: DEV (Device component use); USES (Uses)
(composite pervaporation membrane with ceramic support structure)
IT Epoxy resins, uses
RL: NUU (Other use, unclassified); USES (Uses)
(composite pervaporation membrane with ceramic support structure)
IT Polyurethanes, uses
RL: NUU (Other use, unclassified); USES (Uses)
(composite pervaporation membrane with ceramic support structure)
IT **Polysiloxanes**, uses
RL: DEV (Device component use); USES (Uses)
(di-Me; composite pervaporation membrane with ceramic support structure)
IT Pervaporation
(membranes; composite pervaporation membrane with ceramic support structure)
IT 56-81-5, Glycerin, properties 64-18-6, Formic acid, properties **67-63-0**, Isopropanol, properties 67-64-1, Acetone, properties 77-92-9, Citric acid, properties 141-78-6, Ethyl acetate, properties 7647-01-0, Hydrochloric acid, properties 7664-93-9, Sulfuric acid, properties
RL: PRP (Properties)
(composite pervaporation membrane with ceramic support structure)
IT 64-17-5P, Ethanol, preparation 64-19-7P, Acetic acid, preparation 67-56-1P, Methanol, preparation 75-05-8P, Acetonitrile, preparation 142-82-5P, Heptane, preparation 7732-18-5P, Water, preparation
RL: PUR (Purification or recovery); PREP (Preparation)
(composite pervaporation membrane with ceramic support structure)
RN 56-81-5
RN 64-18-6
RN **67-63-0**
RN 67-64-1
RN 77-92-9
RN 141-78-6
RN 7647-01-0
RN 7664-93-9
RN 64-17-5P
RN 64-19-7P
RN 67-56-1P
RN 75-05-8P
RN 142-82-5P
RN 7732-18-5P

L13 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1998:41700 CAPLUS
DN 128:119648
TI Extraction process for producing poly(DL-lactide-glycolide) microspheres
IN Van Hamont, John; Thies, Curt; Reid, Robert H.; McQueen, Charles E.; Setterstrom, Jean A.
PA United States Dept. of the Army, USA
SO U.S., 9 pp., Cont.-in-part of U.S. Ser. No. 242,960.
CODEN: USXXAM
DT Patent
LA English
IC ICM A61K009-50
NCL 424501000
CC 63-6 (Pharmaceuticals)
FAN.CNT 13

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | US 5705197 | A | 19980106 | US 1996-698896 | 19960816 |
| | US 5693343 | A | 19971202 | US 1994-242960 | 19940516 |
| | US 6447796 | B1 | 20020910 | US 1997-920326 | 19970821 |

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PRAI US 1994-242960     A2     19940516
     US 1984-590308     A2     19840316
     US 1990-493597     B2     19900315
     US 1990-521945     B2     19900511
     US 1991-690485     B2     19910424
     US 1991-805721     B2     19911121
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     US 1995-446148     A2     19950522
     US 1995-446149     B2     19950522
     US 1996-590973     B2     19960124
     US 1996-675895     A2     19960705
     US 1996-698896     A2     19960816
     US 1997-789734     A2     19970127
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AB A **hybrid** evapn.-extn. process for prepg. microspheres of a poly(DL-lactide-glycolide) (I) biodegradable polymer, comprising: (a) prepg. a lyophilized biol. active material-sucrose matrix; adding acetonitrile solvent to biol. active material-sucrose matrix to form a soln.; (b) prepg. a soln. of a biodegradable I by adding acetonitrile solvent to the polymer; (c) adding the biodegradable I acetonitrile soln. to the biol. active material-sucrose acetonitrile soln.; (d) adding with stirring an oil contg. lecithin to the I-sucrose-biol. active material soln. to evap. acetonitrile and form an emulsion contg. microspheres of I biodegradable polymers; (e) adding the emulsion from step d. into a solvent selected from heptane, hexane, pentane or isopropanol; and (f) collecting microspheres of I biodegradable polymers of from 1.0 to about 10.0 .mu.m after filtration and washing with a fresh solvent selected from heptane, hexane, pentane or isopropanol. I microspheres between 5-10.mu.m, with very little aggregation were prepd. according to above method.

ST pharmaceutical microsphere extn polylactide polyglycolide

IT Antigens
Lecithins
Paraffin oils
**Polysiloxanes**, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(extn. process for producing poly(DL-lactide-glycolide) microspheres)

IT Drug delivery systems
(freeze-dried; extn. process for producing poly(DL-lactide-glycolide) microspheres)

IT Lubricating oils
(machine; extn. process for producing poly(DL-lactide-glycolide) microspheres)

IT Drug delivery systems
(microspheres; extn. process for producing poly(DL-lactide-glycolide) microspheres)

IT 57-50-1, biological studies **67-63-0**, Isopropanol;, biological studies 75-05-8, Acetonitrile, biological studies 109-66-0, Pentane, biological studies 110-54-3, Hexane, biological studies 142-82-5, Heptane, biological studies 26780-50-7, Poly(DL-lactide-glycolide)
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(extn. process for producing poly(DL-lactide-glycolide) microspheres)

RN 57-50-1
RN **67-63-0**
RN 75-05-8
RN 109-66-0
RN 110-54-3
RN 142-82-5
RN 26780-50-7

L13 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1998:539347 CAPLUS
DN 129:277633

TI Meerwein-Ponndorf-Verley reductions mediated by lanthanide-alkoxide-functionalized mesoporous silicates
AU Anwander, R.; Palm, C.
CS Institut fur Technische Chemie I, Universitat Stuttgart, Stuttgart, D-70569, Germany
SO Studies in Surface Science and Catalysis (1998), 117(Mesoporous Molecular Sieves 1998), 413-420
CODEN: SSCTDM; ISSN: 0167-2991
PB Elsevier Science B.V.
DT Journal
LA English
CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)
Section cross-reference(s): 24, 67
AB Lanthanide alkoxide moieties were grafted onto mesoporous silicate MCM-41 via surface **siloxide** linkage. Two immobilization procedures were used: treatment of dehydrated MCM-41 with rare earth alkoxide solns. and prepn. of silylamide derivs. in heterogeneous media. The latter procedure facilitated introduction of a wide range of alkoxide ligands via ligand exchange reactions of MCM-41/rare earth amide **hybrid** species with various alcs. The materials were characterized by elemental anal. and FTIR spectroscopy. Nitrogen physisorption measurements revealed that the effective mean pore diam. and pore vol. were markedly affected by the steric bulk of alkoxide ligands. The **hybrid** materials are efficient precatalysts in the Meerwein-Ponndorf-Verley redn. of 4-tert-butylcyclohexanone to the corresponding 4-tert-butylcyclohexanol isomers. The transformations were conducted in 2-propanol and conversions >95 % were accomplished within five hours even at ambient temp., and without formation of any side products.
ST lanthanide alkoxide zeolite catalyst redn; ketone redn alc lanthanide mesoporous silicate; Meerwein Ponndorf Verley redn silicate catalyst
IT Rare earth complexes
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(alc.; neodymium alkoxide-functionalized mesoporous zeolite catalysts for Meerwein-Ponndorf-Verley redn. ketones to alcs.)
IT Zeolite MCM-41
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(lanthanide-alkoxide-functionalized; neodymium alkoxide-functionalized mesoporous zeolite catalysts for Meerwein-Ponndorf-Verley redn. ketones to alcs.)
IT Porous materials
(mesoporous; neodymium alkoxide-functionalized mesoporous zeolite catalysts for Meerwein-Ponndorf-Verley redn. ketones to alcs.)
IT Dehydration reaction
Physisorption
Reduction
Substitution reaction, coordinative
(neodymium alkoxide-functionalized mesoporous zeolite catalysts for Meerwein-Ponndorf-Verley redn. ketones to alcs.)
IT Alcohols, preparation
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(rare earth complexes; neodymium alkoxide-functionalized mesoporous zeolite catalysts for Meerwein-Ponndorf-Verley redn. ketones to alcs.)
IT 41836-23-1DP, Tris[bis(trimethylsilyl)amido]neodymium, mesoporous silicate derivs. 142042-03-3DP, mesoporous silicate derivs.
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(neodymium alkoxide-functionalized mesoporous zeolite catalysts for Meerwein-Ponndorf-Verley redn. ketones to alcs.)
IT 98-52-2P, 4-tert-Butylcyclohexanol

RL: IMF (Industrial manufacture); PREP (Preparation)
(neodymium alkoxide-functionalized mesoporous zeolite catalysts for Meerwein-Ponndorf-Verley redn. ketones to alcs.)

IT 64-17-5, Ethanol, reactions 67-56-1, Methanol, reactions **67-63-0**, Isopropyl alcohol, reactions 75-84-3, Neopentyl alcohol 98-53-3, 4-tert-Butylcyclohexanone
RL: RCT (Reactant); RACT (Reactant or reagent)
(neodymium alkoxide-functionalized mesoporous zeolite catalysts for Meerwein-Ponndorf-Verley redn. ketones to alcs.)

RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD

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RN 41836-23-1DP
RN 142042-03-3DP
RN 98-52-2P
RN 64-17-5
RN 67-56-1
RN **67-63-0**
RN 75-84-3
RN 98-53-3

L13 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1999:208880 CAPLUS
DN 130:313504
TI Fabric softening and antistatic agents containing N-alkanolalkylenepolyamine ester amide compounds
IN Inoue, Kimi
PA Kao Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM D06M013-46
CC 46-5 (Surface Active Agents and Detergents)
Section cross-reference(s): 40
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | JP 11081134 | A2 | 19990326 | JP 1997-235229 | 19970829 |
| | JP 3346235 | B2 | 20021118 | | |
| PRAI | JP 1997-235229 | | 19970829 | | |

OS MARPAT 130:313504

AB The agents comprise (A) R1N(CmH2mOCOR2)(CnH2nNHCOR3) (R1 = C1-4 alkyl, hydroxyalkyl; R2, R3 = C11-21 alkyl or alkenyl; m = 1-10; n = 2-3), their neutralized products or quaternary ammonium compds.; (B) C12-22 linear or branched (un)satd. carboxylic acids; (C) C2-6 glycols, C3-6 aliph. alcs., C8-18 arom. esters or/and C10-15 terpenoid compds.; and (D) perfume. Thus, an antistatic and softening agent was obtained from a mixt. of N-methyl-N-(hydrogenated tallow fatty acid esterified hydroxyethyl)-N-(hydrogenated tallow fatty acid amidated aminopropyl)amine.cntdot.HCl salt 5, hydrogenated tallow fatty acid 1, a 50:25:10:15 mixt. of di-Et phthalate, benzyl salicylate, benzyl acetate and citronellyl acetate, 0.1, and a perfume 0.03%.

ST fabric antistatic softening agent quaternary ammonium compd; fatty acid antistatic softening fabric; perfume antistatic softening fabric; hydrogenated tallow fatty acid alkanolamide softening fabric

IT Alcohols, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(aliph.; fabric softening and antistatic agents from ammonium compds.)

IT Esters, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(arom.; fabric softening and antistatic agents from ammonium compds.)

IT Quaternary ammonium compounds, uses
Terpenes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(fabric softening and antistatic agents contg. N-alkanolalkylenepolyamine ester amide compds.)

IT Antistatic agents
Fabric softeners
Perfumes
(fabric softening and antistatic agents from ammonium compds.)

IT **Polysiloxanes**, uses
RL: MOA (Modifier or additive use); USES (Uses)
(fabric softening and antistatic agents from ammonium compds.)

IT Carboxylic acids, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(fabric softening and antistatic agents from ammonium compds.)

IT Essential oils
RL: TEM (Technical or engineered material use); USES (Uses)
(lavender, perfume; fabric softening and antistatic agents from ammonium compds.)

IT Lavender (Lavandula **hybrida**)
(oils, perfume; fabric softening and antistatic agents from ammonium compds.)

IT Essential oils
RL: TEM (Technical or engineered material use); USES (Uses)
(orange, sweet, perfume compn.; fabric softening and antistatic agents contg. N-alkanolalkylenepolyamine ester amide compds.)

IT Fatty acids, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(palm-oil, esters, compds. with N-alkyl-N-ethanol-1,3-propylenediamine, salts or quaternary compds.; fabric softening and antistatic agents contg. N-alkanolalkylenepolyamine ester amide compds.)

IT Fatty acids, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(palm-oil; fabric softening and antistatic agents contg. N-alkanolalkylenepolyamine ester amide compds.)

IT Essential oils

RL: TEM (Technical or engineered material use); USES (Uses)
(perfume compn.; fabric softening and antistatic agents contg. N-alkanolalkylenepolyamine ester amide compds.)

IT Palm oil
RL: TEM (Technical or engineered material use); USES (Uses)
(stearins, compds. with N-alkyl-N-ethanol-1,3-propylenediamine, salts or quaternary compds.; fabric softening and antistatic agents contg. N-alkanolalkylenepolyamine ester amide compds.)

IT Fatty acids, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(tallow, hydrogenated, esters, compds. with N-alkyl-N-ethanol-1,3-propylenediamine, salts or quaternary compds.; fabric softening and antistatic agents contg. N-alkanolalkylenepolyamine ester amide compds.)

IT Fatty acids, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(tallow, hydrogenated; fabric softening and antistatic agents contg. N-alkanolalkylenepolyamine ester amide compds.)

IT Fatty acids, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(tallow; fabric softening and antistatic agents contg. N-alkanolalkylenepolyamine ester amide compds.)

IT 41999-70-6D, compds. with fatty acids, salts or quaternary compds. 151955-40-7 161444-02-6 171064-63-4 171064-64-5 175716-84-4
RL: TEM (Technical or engineered material use); USES (Uses)
(fabric softening and antistatic agents contg. N-alkanolalkylenepolyamine ester amide compds.)

IT 112-85-6, Docosanoic acid 506-30-9, Eicosanoic acid 544-63-8, Tetradecanoic acid, uses 73756-39-5
RL: TEM (Technical or engineered material use); USES (Uses)
(fabric softening and antistatic agents from ammonium compds.)

IT 67-56-1, Carbinol, uses 77-83-8, Aldehyde C16 78-69-3 78-70-6, Linalool 79-77-6, .beta.-Ionone 80-54-6, Lilial 81-14-1, Musk ketone 93-04-9, Yara yara 97-53-0, Eugenol 101-86-0, Hexyl cinnamic aldehyde 103-95-7, Cyclamen aldehyde 104-61-0, Aldehyde C18 106-02-5, Pentalide 106-22-9, Citronellol 106-24-1 110-41-8, Methylnonylacetaldehyde 120-57-0, Heliotropin 121-32-4, Ethylvanillin 121-33-5, Vanillin 123-11-5, Anisaldehyde, uses 125-12-2, Isobornyl acetate 127-48-0, Edion 128-51-8, Nopyl acetate 151-05-3, Dimethylbenzylcarbinyl acetate 470-82-6, Eucalyptol 1205-17-0, Helional 1506-02-1, Tentarome 2050-08-0, Amyl salicylate 5471-51-2, Raspberry ketone 6864-62-6, Phenyl acetoacetate 8000-41-7, Terpineol 16409-43-1, Rose oxide 23726-91-2, .beta.-Damascone 27134-07-2 30385-25-2, Dihydromyrcenol 32210-23-4, p-tert-Butylcyclohexyl acetate 32388-55-9, Acetylcedrene 41199-19-3, Ambrinol 55066-48-3, Phenoxanol 63429-28-7, .beta.-Methylionone 68140-53-4, Fruitate 80111-68-8, Damascone 80449-98-5, Liral 139504-68-0, Amber core 145334-39-0 176201-25-5, Aldehyde C14 Peach 176201-49-3, Poarenet 177771-82-3, Ambroxan 183601-27-6 223447-73-2, Tetrahydromugol
RL: TEM (Technical or engineered material use); USES (Uses)
(perfume compn.; fabric softening and antistatic agents contg. N-alkanolalkylenepolyamine ester amide compds.)

IT 60-12-8, Phenylethyl alcohol 77-54-3, Cedryl acetate 80-26-2 91-64-5, Coumarin 93-08-3, Methyl .beta.-naphthyl ketone 101-84-8, Diphenyl oxide 104-55-2, Cinnamic aldehyde 122-78-1, Phenyl acetaldehyde 143-07-7, Dodecanoic acid, uses 497-62-1 1222-05-5, Pearlide 21677-96-3, Geranylnitrile 43052-87-5, .alpha.-Damascone 51566-62-2, Citronellyl nitrile 68039-49-6, Tripral 124899-75-8 188647-24-7
RL: TEM (Technical or engineered material use); USES (Uses)
(perfume compn.; fabric softening and antistatic agents from ammonium compds.)

IT 57-11-4, Octadecanoic acid, uses 57-55-6, 1,2-Propanediol, uses
**67-63-0**, Isopropyl alcohol, uses 84-66-2, Diethyl phthalate
93-92-5, Styrallyl acetate 103-45-7 103-54-8, Cinnamyl acetate
105-85-1, Citronellyl formate 105-87-3, Geranyl acetate 107-21-1,
1,2-Ethanediol, uses 112-80-1, Oleic acid, uses 115-95-7, Linalyl
acetate 118-58-1, Benzyl salicylate 119-36-8, Methyl salicylate
122-69-0, Cinnamyl cinnamate 134-20-3, Methyl anthranilate 140-11-4,
Benzyl acetate 150-84-5, Citronellyl acetate 326-61-4, Heliotropyl
acetate 928-96-1, cis-3-Hexenol 6259-76-3, Hexyl salicylate
25265-71-8, Dipropylene glycol 56539-66-3, 3-Methoxy-3-methylbutanol
65405-77-8, cis-3-Hexenyl salicylate
RL: TEM (Technical or engineered material use); USES (Uses)
(perfume retention aids; fabric softening and antistatic agents contg.
N-alkanolalkylenepolyamine ester amide compds.)

IT 57-10-3, Palmitic acid, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(perfume retention aids; fabric softening and antistatic agents from
ammonium compds.)

RN 41999-70-6D
RN 151955-40-7
RN 161444-02-6
RN 171064-63-4
RN 171064-64-5
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RN 112-85-6
RN 506-30-9
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RN 73756-39-5
RN 67-56-1
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RN 78-69-3
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RN 97-53-0
RN 101-86-0
RN 103-95-7
RN 104-61-0
RN 106-02-5
RN 106-22-9
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RN 16409-43-1
RN 23726-91-2
RN 27134-07-2

RN 30385-25-2
RN 32210-23-4
RN 32388-55-9
RN 41199-19-3
RN 55066-48-3
RN 63429-28-7
RN 68140-53-4
RN 80111-68-8
RN 80449-98-5
RN 139504-68-0
RN 145334-39-0
RN 176201-25-5
RN 176201-49-3
RN 177771-82-3
RN 183601-27-6
RN 223447-73-2
RN 60-12-8
RN 77-54-3
RN 80-26-2
RN 91-64-5
RN 93-08-3
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RN 104-55-2
RN 122-78-1
RN 143-07-7
RN 497-62-1
RN 1222-05-5
RN 21677-96-3
RN 43052-87-5
RN 51566-62-2
RN 68039-49-6
RN 124899-75-8
RN 188647-24-7
RN 57-11-4
RN 57-55-6
RN **67-63-0**
RN 84-66-2
RN 93-92-5
RN 103-45-7
RN 103-54-8
RN 105-85-1
RN 105-87-3
RN 107-21-1
RN 112-80-1
RN 115-95-7
RN 118-58-1
RN 119-36-8
RN 122-69-0
RN 134-20-3
RN 140-11-4
RN 150-84-5
RN 326-61-4
RN 928-96-1
RN 6259-76-3
RN 25265-71-8
RN 56539-66-3
RN 65405-77-8
RN 57-10-3